



City of Seattle
Seattle Public Utilities

December 30, 2011

Katherine Scott
Washington Department of Ecology
Toxic Cleanup Program
PO Box 47600
Olympia, WA 98504-7600

Subject: Interagency Agreement C1100067, final project report.

Dear Ms. Scott:

This is the progress report summarizing work completed as of December 30, 2011 under Interagency Agreement C1100067 for the Lower Duwamish Waterway (LDW) source tracing project. We are awaiting invoices from our consultants and will submit a final invoice for the period July 1 through December 31, 2011 shortly. Electronic versions of this material have been emailed to you and Dan Cargill. SPU has completed the following work under this agreement:

Task 1: Project management. SPU continues to oversee the project consultants (Taylor TEC and Pyron Environmental), process invoices, and manage project files.

Task 2: Sediment traps. Retrieved samples from the following 18 sediment traps:

1 st -ST1	96-ST1	HP-ST4
1 st -ST2	96-ST2	HP-ST6
1 st -ST7	96-ST3	KN-ST1
7 th -ST1	ID-ST1	KCIA1-ST1
7 th -ST2	ID-ST2	KCIA2-ST1
7 th -ST3	DK-ST1	HC-ST1

Samples were not collected from KCIAJ-ST1 and 1st-ST5, because of lack of material in the trap. All traps were re-installed to allow future sample collection. Inline grab samples were collected with each trap, except at 1st-ST7, HP-ST4, and ID-ST1 due to insufficient sediment accumulation in the pipe. Sampling locations are described in Table 1 and shown on Figure 1. Chemistry results are provided in Table 2. Dot maps showing the geographic distribution of PCBs, mercury, HPAH, and dioxins/furans for all samples collected are provided in Figures 2 through 5. Highlights of sample results are provided below:

- 1st-ST7 contained higher levels of HPAH (24,500 ug/kg dw) than the previous sample collected in 2009 (4,580 ug/kg dw). Additional source tracing may be warranted in this subbasin.

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- ID-ST1 contained elevated levels of HPAH (88,600 ug/kg dw). This is consistent with the previous sample collected in 2009 (108,800 ug/kg dw). Source tracing in this area was conducted under Task 3, but was hindered by lack of sediment in the lines. The drainage area at this location is primarily residential. South Seattle Community College is the largest single non-residential landowner in the basin. SPU recently inspected the property, but no sources of HPAH were identified.
- KCIA2-ST1 contained higher levels of HPAH (83,320 ug/kg dw) than the previous sample collected in 2009 (32,700 ug/kg dw). HPAHs were also high in the inline grab collected at this location (17,458 ug/kg dw). King County International Airport will be informed of the results so they can conduct appropriate actions.

Task 3: Source tracing/characterization: Collected 55 right-of-way catch basin, 5 onsite catch basin, 31 inline, and 9 soil samples. Sample locations are listed in Table 1 and shown on Figure 1. Results are provided in Table 2.

Highlights of the source tracing results are summarized below:

- Norfolk CSO/PS17 EOF/SD. Two samples contained elevated levels of HPAH (57,360 ug/kg dw at RCB266 and 20,650 ug/kg dw at MH7). RCB266, which on the combined sewer system, is located on 39th Ave S north of S Benefit St, in a primarily residential neighborhood. SPU will investigate the area to identify potential sources. See Figure 4 for map showing geographic distribution of HPAH results.

MH7 is located at the SW corner of Martin Luther King, Jr. Wy S (MLK Wy S) and S Norfolk St. Previous samples at this location did not contain elevated levels of HPAH (550 and 4,330 ug/kg dw). SPU investigated this system in 2004-2005. Two sources of HPAH (wash pad on Coluccio property at 9600 MLK Wy S and discharges from the AA Wrecking facility property at 9802 MLK Wy S) were found and eliminated. In addition, the MLK Wy S portion of this system was jetted and cleaned in the summer of 2005 in advance of the Sound Transit project. Source tracing in this area was hindered by lack of sediment in the mainline. Two catch basin samples were collected upstream of MH7. HPAH was high in the onsite catch basin (17,340 ug/kg dw at CB210) at Specialty Asphalt, but low (3,378 ug/kg dw) in the catch basin on the east side of MLK Wy S opposite AA Wrecking. SPU will re-inspect Specialty Asphalt. HPAH was also relatively high in a catch basin downstream of MH7 (11,140 ug/kg dw at CB213). CB213 is in the Coluccio storage yard located on the west side of MLK Wy S, just south of S Norfolk St (parcel #0323049236). SPU plans to evaluate whether additional line cleaning and/or video-inspection are needed in this area.
- Marine Lumber Service, Inc. south yard at 5th Ave S and S Monroe St (7th Ave S SD). Marine Lumber stores lumber treated with ammoniacal copper zinc arsenate (ACZA) at this site and earlier sampling conducted by SPU found elevated levels of arsenic (710 mg/kg) in dust samples collected from the pavement. Runoff from the pavement sheet flows to the right-of-way along S Monroe St. Soil samples were collected at three locations along the north edge of S Monroe St, as requested by Ecology. SPU and

Ecology have been working with the property owner to implement appropriate source controls to control arsenic from the treated lumber stored at this site.

The owner has been cooperative and has made a number of improvements, but wood preservative continues to leach onto the paved yard area. Soil data indicate that arsenic (260 mg/kg) and copper (2,110 mg/kg) are elevated at 1 foot below the ground surface in the vicinity of the gate on S Monroe St. Metals concentrations are at or below the CSL benchmarks at 1-foot depth at the other two locations sampled at this site. Marine Lumber was recently awarded a King County grant to install canopies over the piles of treated lumber, which should greatly reduce offsite migration of contaminants.

- RCB225 (S Myrtle St SD). Elevated levels of copper (860 mg/kg), lead (724 mg/kg), mercury (1.53 mg/kg) and PCBs (8,230 ug/kg dw) were found in this catch basin located on the south side of S Myrtle St just east of the Seattle Iron and Metals Corporation (SIMC) entrance. This catch basin was cleaned by SPU in late 2009 and again in November 2010 by SIMC (at the request of SPU). As part of a voluntary compliance agreement with SPU, SIMC has agreed to install a media filter-type treatment system at this location to control metals discharged to the City storm drain system. SIMC will obtain a street use permit for installation, operation, and maintenance of the unit.
- RCB227 (7th Ave S SD). Very high concentrations of bis(2-ethylhexylphthalate) were found in this catch basin (1,400,000 ug/kg dw). RCB227 is located at the southeast corner of 7th Ave S and S Monroe St. This sample was collected to evaluate potential contributions to the City storm drain system from the Independent Metals Plant #1. Copper (406 mg/kg) was also elevated at this location. BEHP concentrations in other samples collected in the vicinity of Plant #1 (RCB 228, 276, and 277) were more than three orders of magnitude lower than the levels found in RCB227. However, copper was also high at RCB 276 (532 mg/kg) located one block east of RCB227.
- RCB229 (combined sewer system). Elevated concentrations of copper (641 mg/kg), mercury (3.8 mg/kg), and zinc (1,640 mg/kg) were found in this sample. RCB229 is a composite of two grab samples collected from the catch basins on either side of the driveway entrance at Independent Metals Plant #2 at the corner of 8th Ave S and S Chicago St. Both catch basins are connected to the combined sewer system on 8th Ave S. With the exception of PCBs, these contaminants are similar to what has been found in the vicinity of another large metal recycler in the basin (RCB225 at Seattle Iron and Metals Corporation). PCBs in RCB229 (710 ug/kg dw) are an order of magnitude lower than the levels found at RCB225. It appears that trackout and/or atmospheric deposition from recycling operations may be a concern at this site.
- CB206 (private storm drain). SPU re-sampled this catch basin on the Independent Metals Plant #2 site at the request of Ecology. CB206 was sampled in 2009. Similar to the previous sample, CB206 contains elevated levels of copper (557 mg/kg), mercury (0.74 mg/kg), zinc (4,150 mg/kg), PCBs (2,462 ug/kg dw), LPAH (8,620 ug/kg dw), and HPAH (28,140 ug/kg dw). Although concentrations are generally lower in the

recent sample, they continue to exceed the CSL/2LAET benchmarks used by SPU and the Source Control Work Group to evaluate storm drain solids data.

- Diagonal Ave S CSO/SD. In April 2010, elevated levels of PCBs (13,300 ug/kg dw) were found in the inline grab collected at the maintenance hole where sediment trap ST1 was previously installed. The previous 6 samples collected at this location contained <19 to 170 ug/kg dw total PCBs. Additional source tracing was conducted in October 2011 (see Figure 2). The October 2011 sample from ST1 contained 43 ug/kg dw total PCBs. PCBs in inline samples collected upstream of ST1 were low:

Station ID	Sample Location	Distance upstream of ST1 (ft)	total PCBs (ug/kg dw)
MH245	Diagonal Ave S at Ohio Ave S, NE corner	600	30
MH210	Diagonal Ave S at Colorado Ave S, NE corner	1,030	23Y
MH14	Diagonal Ave S east of 2 nd Ave S, inside SCL South Yard fence line, 132-inch mainline	2,600	20UJ
T2b	Diagonal Ave S east of 2 nd Ave S, 48-inch lateral	2,600	420

SPU will continue to monitor this area for PCBs.

Task 4: Ecology building material project co-sampling. This task was not completed because it was not possible to collect storm drain sediment samples that would be representative of the building samples as samples were composited from 2-3 buildings located several or more blocks apart.

Task 5: Dioxin analysis. Dioxins/furans were analyzed in 34 storm drain sediment samples collected from the following 9 drainage basins in the LDW plus West Seattle:

- Diagonal Ave S CSO/SD
- KCIA SD1
- KCIA SD2/PS45 EOF
- SW Idaho St SD
- Georgetown neighborhood (combined sewer service area)
- 7th Ave S SD/South Park neighborhood
- 1st Ave S SD (west)
- S 96th St SD
- Hamm Creek
- West Seattle neighborhood (drains to Puget Sound)

Dioxins/furans results are listed in Table 3 and sampling locations are shown on Figure 1. Sample results are displayed on Figure 5. Because previous sampling has been conducted exclusively within the industrial portions of the basin, sample locations for this effort were selected to represent primarily residential areas. The one exception is in the Diagonal Ave S CSO/SD drainage basin where 3 trap samples retrieved in April 2010 and archived at the laboratory were analyzed to evaluate potential trends in concentrations between the lower basin, which is primarily industrial, and upper drainage basin, which is primarily residential. Sample coverage included the LDW drainage basin, as well as the West Seattle residential area. Additional samples were collected from the West Seattle, Georgetown, and South Park study

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areas that Ecology identified for its recent urban soil background study (Hart Crowser 2011)¹. Residential sampling locations were selected randomly:

- Areas within the SPU GIS coverage area: stations were selected by first extracting all catch basins located in residentially-zoned areas within the LDW drainage area and then using the random number generator tool in Excel to identify individual locations.
- Areas outside the SPU GSI coverage area (e.g., S 96th St storm drain and Hamm Creek drainage basins): sampling locations were randomly selected from King County drainage system maps.

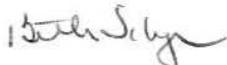
Task 6: Data validation. All data have been validated. Validation reports are provided on the enclosed CD.

Task 7: Reporting. This is the final progress report submitted for this contract.

Task 8: Data base. All of the data collected under this agreement have been uploaded to the Ecology Environmental Information System (EIMS) data base. Data have also been provided on a CD.

Please let me know if you need any additional information. Thanks for the help in expanding SPU's source tracing efforts.

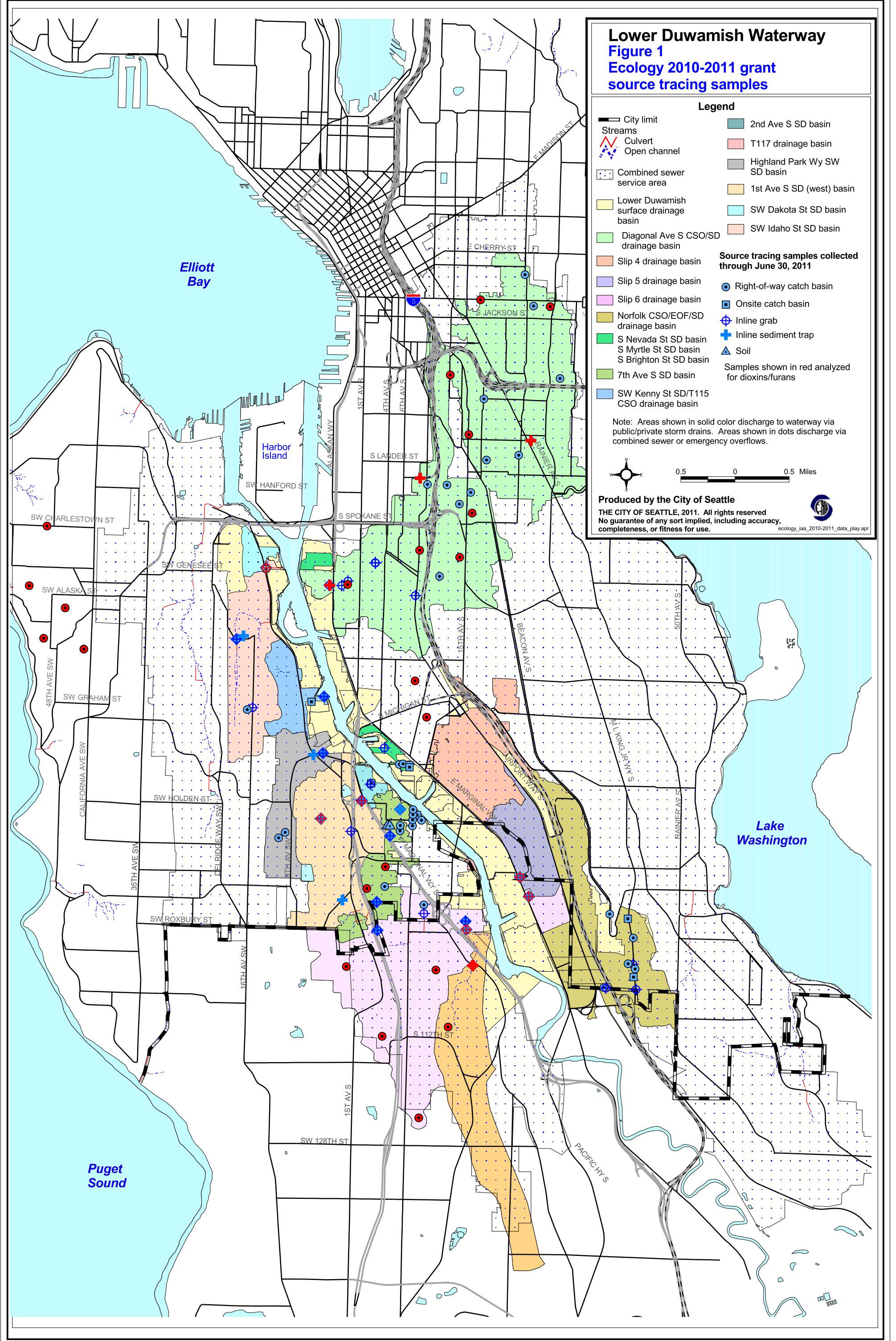
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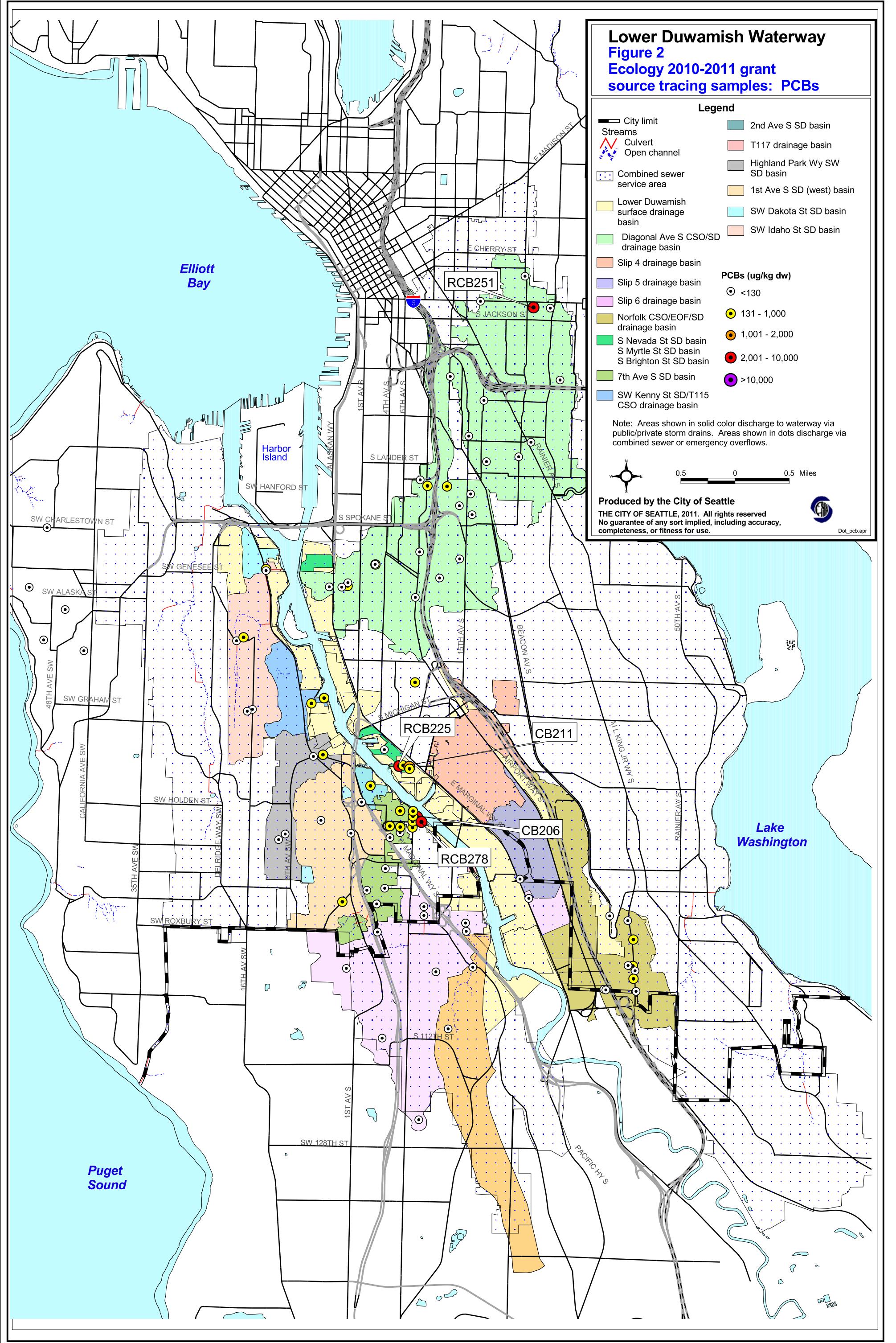


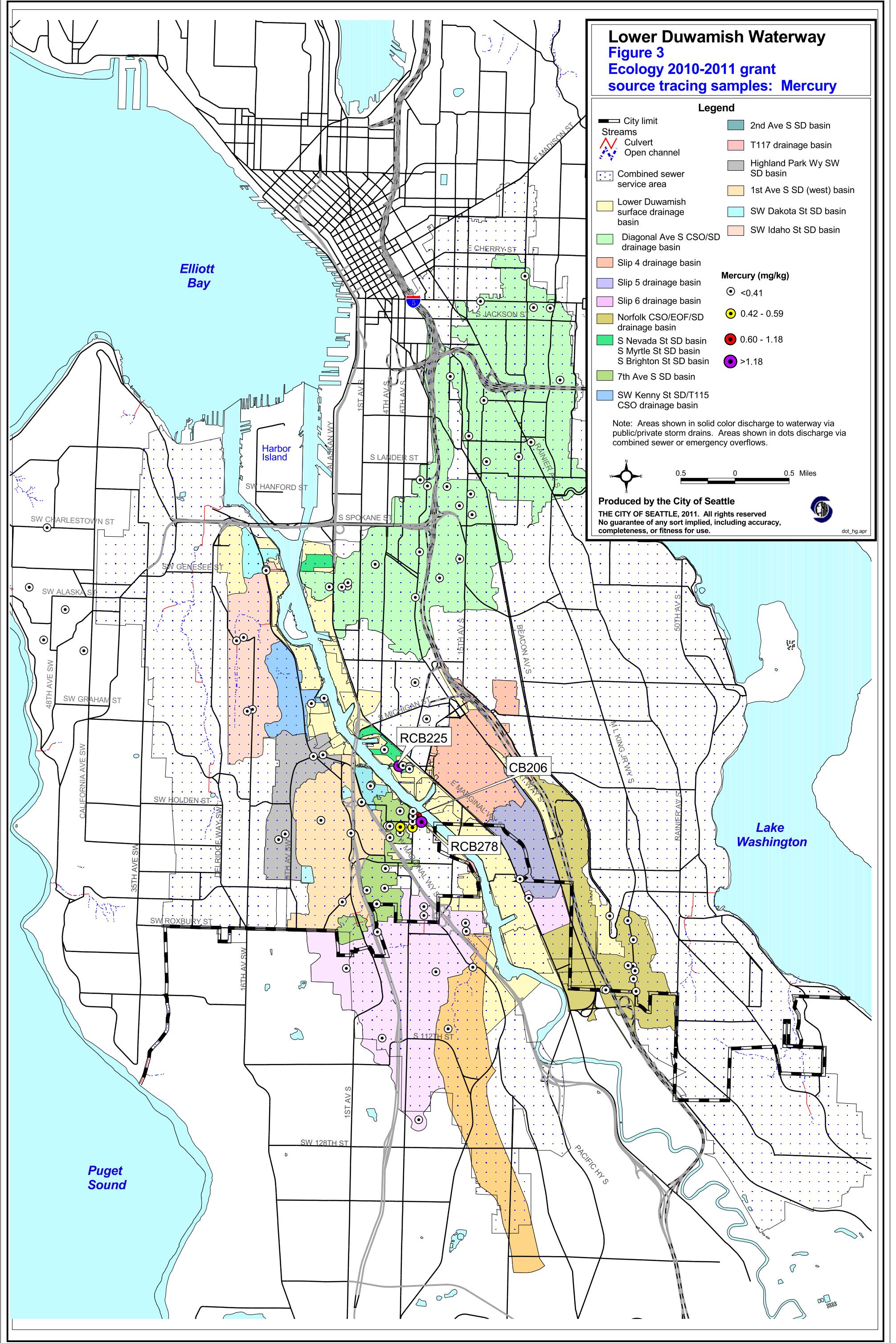
Beth Schmoyer

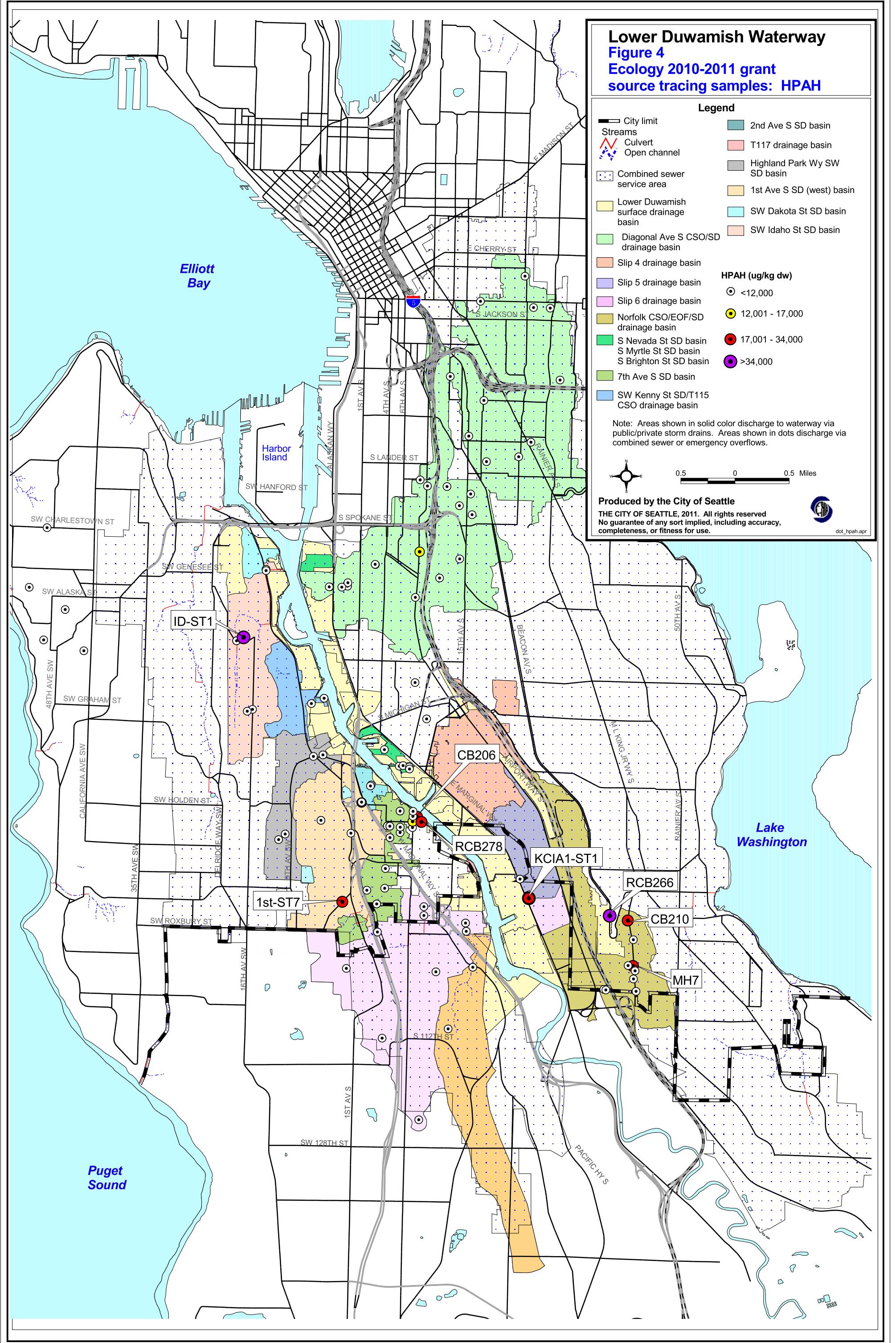
cc: Dan Cargill

¹ Hart Crowser. 2011. Sampling and analysis plan quality assurance project plan, Washington State urban background soil concentration study. Prepared for Washington State Department of Ecology by Hart Crowser, Seattle, WA.

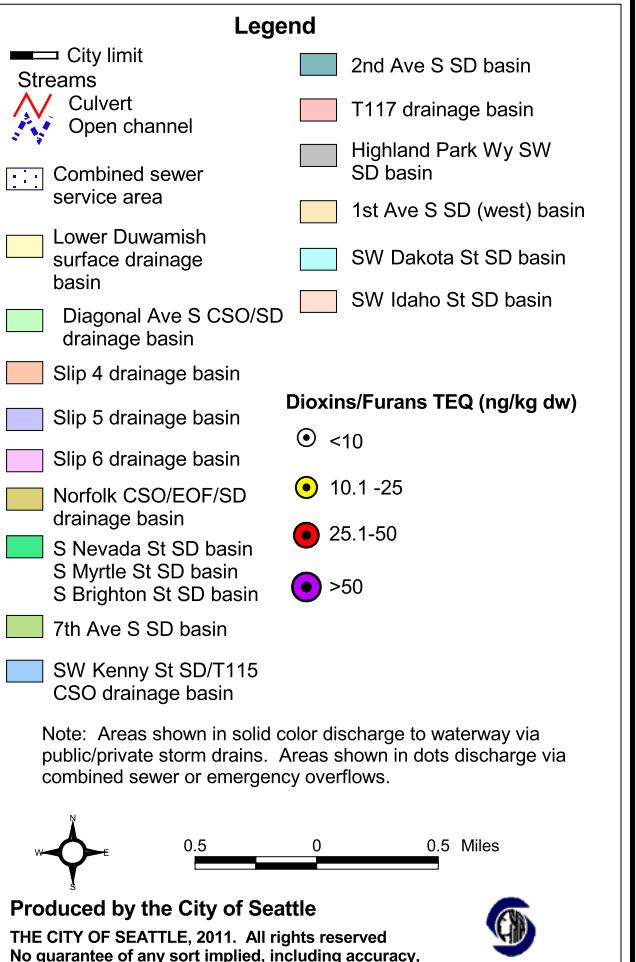








Lower Duwamish Waterway
Figure 5
Ecology 2010-2011 grant
source tracing samples: dioxins/furans



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dot_dioxins.apr

Table 1: Ecology interagency agreement: sampling locations (2010-2011).

Station ID	Sample No.	Date	Type	Sewer	Lab Ref	Dioxin	EAA/SCA	Outfall	Structure #	Location	Xcoord	Ycoord
SEDIMENT TRAPS												
1ST-ST1	1st-ST1-110410	11/04/10	Trap	SD	RW15, RV25	RM 3.4 to 3.8 west		1st Ave S SD (west)	819183	1st Ave S pond, N side of S Holden St--SR99 inlet	1,269,971.12	198,541.44
1ST-ST1	1st-ST1-110410-G	11/04/10	Inline	SD	RW15, RV25	RM 3.4 to 3.8 west		1st Ave S SD (west)	819183	1st Ave S pond, N side of S Holden St--SR99 inlet	1,269,971.12	198,541.44
1ST-ST2	1st-ST2-110410	11/04/10	Trap	SD	RW15, RV25	RM 3.4 to 3.8 west		1st Ave S SD (west)	786737	1st Ave S pond, N side of S Holden St--SR509 inlet	1,269,970.80	198,570.70
1ST-ST2	1st-ST2-110410-G	11/04/10	Inline	SD	RW15, RV25	RM 3.4 to 3.8 west		1st Ave S SD (west)	786737	1st Ave S pond, N side of S Holden St--SR509 inlet	1,269,970.80	198,570.70
1ST-ST3	1st-ST3-111110	11/11/10	Trap	SD	RW33	RM 3.4 to 3.8 west		1st Ave S SD (west)	714107	SW Kenyon St at 4th Ave SW	1,267,991.38	197,680.32
1ST-ST3	1st-ST3-111110-G	11/11/10	Inline	SD	RW33	RM 3.4 to 3.8 west		1st Ave S SD (west)	714107	SW Kenyon St at 4th Ave SW	1,267,991.38	197,680.32
1ST-ST7	1st-ST7-111110	11/11/10	Trap	SD	RW33	RM 3.4 to 3.8 west		1st Ave S SD (west)	600461	In turn lane of Olsen PI SW just west of 1st Ave S	1,269,028.98	193,714.03
7th-ST1	7th-ST1-120110	12/01/10	Trap	SD	RZ02, SA02, SA03	RM 2.2 to 3.4 west		7th Ave S SD	599721	S Portland St and 7th Ave S	1,271,845.54	198,135.36
7th-ST1	7th-ST1-120110-G	12/01/10	Inline	SD	RZ02, SA02, SA03	RM 2.2 to 3.4 west		7th Ave S SD	599721	S Portland St and 7th Ave S	1,271,845.54	198,135.36
7th-ST2	7th-ST2-111110	11/11/10	Trap	SD	RW33	RM 2.2 to 3.4 west		7th Ave S SD	878755	4th Ave S at S Barton St, next to P-Patch	1,270,702.00	193,616.50
7th-ST2	7th-ST2-111110-G	11/11/10	Inline	SD	RW33	RM 2.2 to 3.4 west		7th Ave S SD	878755	4th Ave S at S Barton St, next to P-Patch	1,270,702.00	193,616.50
7th-ST3	7th-ST3-111110	11/11/10	Trap	SD	RW33	RM 2.2 to 3.4 west		7th Ave S SD	599941	S Southern St just west of 7th Ave S	1,271,346.96	196,842.03
7th-ST3	7th-ST3-111110-G	11/11/10	Inline	SD	RW33	RM 2.2 to 3.4 west		7th Ave S SD	599941	S Southern St just west of 7th Ave S	1,271,346.96	196,842.03
96-ST1	96-ST1-120110	12/01/10	Trap	SD	RZ02, SA02, SA03	RM 3.8 to 4.2 west		S 96th St SD	NA	S 95th St just east of W Marginal PI S	1,270,741.32	192,246.67
96-ST1	96-ST1-120110-G	12/01/10	Inline	SD	RZ02, SA02, SA03	RM 3.8 to 4.2 west		S 96th St SD	NA	S 95th St just east of W Marginal PI S	1,270,741.32	192,246.67
96-ST2	96-ST2-120110	12/01/10	Trap	SD	RZ02, SA02, SA03	RM 3.8 to 4.2 west		S 96th St SD	NA	S 96th St just east of W Marginal PI S	1,275,063.56	192,278.28
96-ST2	96-ST2-120110-G	12/01/10	Inline	SD	RZ02, SA02, SA03	RM 3.8 to 4.2 west		S 96th St SD	NA	S 96th St just east of W Marginal PI S	1,275,063.56	192,278.28
96-ST3	96-ST3-120310	12/03/10	Trap	SD	RZ17	RM 3.8 to 4.2 west		S 96th St SD	NA	Vault on west end of S 96th St at 4th Ave S	1,275,030.99	192,684.64
96-ST3	96-ST3-120310-G	12/03/10	Inline	SD	RZ17	RM 3.8 to 4.2 west		S 96th St SD	NA	Vault on west end of S 96th St at 4th Ave S	1,275,030.99	192,684.64
ID-ST3	DK-ST1-110410	11/04/10	Trap	SD	RW15, RV25	RM 0.0 to 1.0 west		SW Idaho St SD	NA	Channel at north end of 19th Ave SW at SW Dawson St	1,263,879.13	206,423.86
ID-ST3	DK-ST1-110410-G	11/04/10	Inline	SD	RW15, RV25	RM 0.0 to 1.0 west		SW Idaho St SD	NA	Channel at north end of 19th Ave SW at SW Dawson St	1,263,879.13	206,423.86
HC-ST1	HC-ST1-110410	11/04/10	Trap	SD	RW15, RV25	RM 4.2 to 4.8 west		Hamm Creek	NA	Culvert under Des Moines Memorial Dr S	1,275,382.75	190,530.64
HC-ST1	HC-ST1-110410-G	11/04/10	Inline	SD	RW15, RV25	RM 4.2 to 4.8 west		Hamm Creek	NA	Culvert under Des Moines Memorial Dr S	1,275,382.75	190,530.64
HP-ST4	HP-ST4-111110	11/11/10	Trap	SD	RW33	RM 1.6 to 2.1 west		Highland Park Wy SW SD	599241	NW corner of W Marginal Wy SW and Highland Pk Wy SW	1,267,618.04	200,796.20
HP-ST6	HP-ST6-111810	11/18/10	Trap	SD	RX79, RZ07	RM 1.6 to 2.1 west		Highland Park Wy SW SD	599219	SW Michigan St just east of W Marginal Wy SW	1,268,086.32	200,870.80
HP-ST6	HP-ST6-111810-G	11/18/10	Inline	SD	RX79, RZ07	RM 1.6 to 2.1 west		Highland Park Wy SW SD	599219	SW Michigan St just east of W Marginal Wy SW	1,268,086.32	200,870.80
ID-ST1	ID-ST1-111810	11/18/10	Trap	SD	RX79, RZ07	RM 0.0 to 1.0 west		SW Idaho St SD	598047	SW Hudson St at 18th Ave SW	1,264,220.16	206,583.53
ID-ST2	ID-ST2-111810	11/18/10	Trap	SD	RX79, RZ07	RM 0.0 to 1.0 west		SW Idaho St SD	597411	SW Idaho St just east of W Marginal Wy SW	1,265,316.19	209,904.80
ID-ST2	ID-ST2-111810-G	11/18/10	Inline	SD	RX79, RZ07	RM 0.0 to 1.0 west		SW Idaho St SD	597411	SW Idaho St just east of W Marginal Wy SW	1,265,316.19	209,904.80
KCIA1-ST1	KCIA1-ST1-120310	12/03/10	Trap	SD	RZ17	RM 3.9 to 4.3 east		KCIA SD#1	KC #1060	KCIA SD#1 at 9010 E Marginal Way S	1,278,114.80	193,883.20
KCIA1-ST1	KCIA1-ST1-120310-G	12/03/10	Inline	SD	RZ17	RM 3.9 to 4.3 east		KCIA SD#1	KC #1060	KCIA SD#1 at 9010 E Marginal Way S	1,278,114.80	193,883.20
KCIA2-ST1	KCIA2-ST1-120310	12/03/10	Trap	SD	RZ17	RM 3.7 to 3.9 east		KCIA SD#2/PS45 EOF	NA	KCIA SD #2 at S 87th Pl and E Marginal Way S, downstream of pump station	1,277,685.38	194,822.09
KCIA2-ST1	KCIA2-ST1-120310-G	12/03/10	Inline	SD	RZ17	RM 3.7 to 3.9 east		KCIA SD#2/PS45 EOF	NA	KCIA SD #2 at S 87th Pl and E Marginal Way S, downstream of pump station	1,277,685.38	194,822.09
KN-ST1	KN-ST1-111810	11/18/10	Trap	SD	RX79, RZ07	RM 1.3 to 1.6 west		SW Kenny St SD/T115 CSO	598644	E end of S Kenny St, on T115	1,268,138.36	203,628.91
KN-ST1	KN-ST1-111810-G	11/18/10	Inline	SD	RX79, RZ07	RM 1.3 to 1.6 west		SW Kenny St SD/T115 CSO	598644	E end of S Kenny St, on T115	1,268,138.36	203,628.91
1ST-ST5	NA		Trap	SD	No sample	RM 3.4 to 3.8 west		1st Ave S SD (west)	786748	SR 509 (northbound), Occidental St off ramp	1,269,687.50	198,011.80
KCIAJ-ST1	No sediment present		Trap	SD	No sample	RM 2.8 to 3.7 east		KCIA-Jorgensen SD	NA	KC MH-2-E. Trap moved 30 ft east to ex MH when KC modified system in 2009	1,277,261.40	195,824.50
SOURCE TRACING: CBs and RCBs												
CB206	CB206-041311	04/13/11	CB	SD	SR72	RM 2.2 to 3.4 west		Private SD	NA	CB inside gate at 7814 8th Ave S	1,272,667.29	197,852.95
CB210	CB210-042011	04/20/11	CB	SD	SS85	RM 4.9 east		Norfolk CSO/SD/PS17 EOF	NA	West of MLK Jr Way S near Merton Way S	1,282,931.10	192,804.75
CB211	CB211-042911	04/29/11	CB	SD	SU75, SW05	RM 2.3 to 2.8 east		S Myrtle St SD	1805459	CB at 719 S Myrtle St, north of bldg, adjacent to S Myrtle St	1,272,291.49	200,283.84
CB212	CB212-042911	04/29/11	CB	SD	SU75, SW05	RM 2.3 to 2.8 east		S Myrtle St SD	1807595	CB at 719 S Myrtle St, south of bldg.	1,272,304.18	200,184.21
CB213	CB213-050211	05/02/11	CB	SD	SV01	RM 4.9 east		Norfolk CSO/SD/PS17 EOF	4119745	W side MLK Jr Way S , inside fence line about 700 ft S of S Norfolk St	1,283,210.45	189,964.11
CB108	CB108-041311	04/13/11	RCB	SD	SR72	RM 2.1 to 2.2 west		2nd Ave S SD	NA	S Fontanelle St at 2nd Ave S, NW corner	1,270,436.09	199,406.88
RCB154	RCB154-041311	04/13/11	RCB	SD	SR72	RM 3.8 to 4.2 west		S 96th St SD	RCB154	Sand box on NW corner of S Barton St and 10th Ave S	1,273,002.61	193,484.21
RCB225	RCB225-020211	02/02/11	RCB	SD	SH27	RM 2.3 to 2.8 east		S Myrtle St SD	576162	S Myrtle St btw Fox Ave S and 7th Ave S, south side, E of SIMC driveway	1,271,798.63	200,322.09
RCB226	RCB226-020211	02/02/11	RCB	SD								

Table 1: Ecology interagency agreement: sampling locations (2010-2011).

Station ID	Sample No.	Date	Type	Sewer	Lab Ref	Dioxin	EAA/SCA	Outfall	Structure #	Location	Xcoord	Ycoord
RCB241	RCB241-040111	04/01/11	RCB	SD	SQ00, E1100342	✓	RM 0.1 to 0.9 east	Diagonal Ave S CSO/SD	571852	Off the road on S Andover St and Airport Way S on the east side of the northbound	1,272,797.16	210,750.59
RCB242	RCB242-040111	04/01/11	RCB	SD	SQ00, E1100342	✓	RM 0.1 to 0.9 east	Diagonal Ave S CSO/SD	572481	Denver Ave S and Colorado Ave S, NE corner	1,269,289.90	209,089.46
RCB243	RCB243-040811	04/08/11	RCB	SD	SR10, E1100369	✓	RM 0.1 to 0.9 east	Diagonal Ave S CSO/SD	567698	12th Ave S and S Judkins St, SE corner	1,274,288.73	219,292.66
RCB244	RCB244-040811	04/08/11	RCB	SD	SR10, E1100369	✓	RM 0.1 to 0.9 east	Diagonal Ave S CSO/SD	568939	15th Ave S and S Walker St, SE corner	1,275,187.61	216,391.46
RCB245	RCB245-040811	04/08/11	RCB	SD	SR10, E1100369	✓	RM 0.1 to 0.9 east	Diagonal Ave S CSO/SD	572009	S Dakota St and 14th Ave S, SE corner	1,274,746.40	210,413.10
RCB246	RCB246-040811	04/08/11	RCB	SD	SR10, E1100369	✓	RM 0.1 to 0.9 east	Diagonal Ave S CSO/SD	570900	S Hinds St and 16th Ave S, NE corner	1,275,349.11	212,566.92
RCB247	RCB247-040811	04/08/11	RCB	SD	SR10, E1100369	✓	RM 0.1 to 0.9 east	Diagonal Ave S CSO/SD	566525	E Yesler Way and 16th Ave S, SE corner	1,275,761.08	222,955.80
RCB248	RCB248-040811	04/08/11	RCB	SD	SR10, E1100369	✓	RM 0.1 to 0.9 east	Diagonal Ave S CSO/SD	566639	27th Ave S and S Washington St, NE corner	1,279,156.76	222,623.20
RCB249	RCB249-042011	04/20/11	RCB	SD	SS85		RM 0.1 to 0.9 east	Diagonal Ave S CSO/SD	570442	S side of S Winthrop St between 15th and 16th Ave S	1,275,278.52	213,571.12
RCB250	RCB250-042011	04/20/11	RCB	SD	SS85		RM 0.1 to 0.9 east	Diagonal Ave S CSO/SD	565921	23rd Ave and E Terrace St, SW corner	1,277,923.07	224,175.16
RCB251	RCB251-042011	04/20/11	RCB	SD	SS85		RM 0.1 to 0.9 east	Diagonal Ave S CSO/SD	566629	24th Ave S and S Washington St, NE corner	1,278,343.26	222,646.59
RCB252	RCB252-042011	04/20/11	RCB	SD	SS85		RM 0.1 to 0.9 east	Diagonal Ave S CSO/SD	567758	S Irving St and 29th Ave S, NW corner	1,279,636.12	219,120.10
RCB253	RCB253-042011	04/20/11	RCB	SD	SS85		RM 0.1 to 0.9 east	Diagonal Ave S CSO/SD	568198	17th Ave S and S Massachusetts St, SE corner	1,275,925.76	218,127.09
RCB254	RCB254-042211	04/22/11	RCB	SD	ST44		RM 0.1 to 0.9 east	Diagonal Ave S CSO/SD	569427	23rd Ave S and S Bayview St, SW corner	1,277,622.20	215,387.25
RCB255	RCB255-042211	04/22/11	RCB	SD	ST44		RM 0.1 to 0.9 east	Diagonal Ave S CSO/SD	569591	18th Ave S and S Waite St, SE corner	1,276,049.07	215,148.82
RCB256	RCB256-042211	04/22/11	RCB	SD	ST44		RM 0.1 to 0.9 east	Diagonal Ave S CSO/SD	570255	12th Ave S and S Stevens St, SW corner	1,274,130.19	213,930.94
RCB257	RCB257-042211	04/22/11	RCB	SD	ST44		RM 0.1 to 0.9 east	Diagonal Ave S CSO/SD	570661	14th Ave S and S Horton St, NW corner	1,274,731.20	213,004.86
RCB258	RCB258-042211	04/22/11	RCB	SD	ST44		RM 0.1 to 0.9 east	Diagonal Ave S CSO/SD	572357	E side of 11th Ave S at Powell PI S	1,273,768.25	209,483.90
RCB259	RCB259-042211	04/22/11	RCB	SD	ST44		RM 0.0 to 1.0 west	SW Idaho St SD	909544	E side of 17th Ave SW opposite #6306	1,264,399.56	202,998.69
RCB260	RCB260-042211	04/22/11	RCB	SD	ST44		RM 1.6 to 2.1 west	Highland Park Wy SW SD	909850	E side of 11th Ave SW between SW Elmgoe St and SW Thistle St	1,265,929.30	196,745.06
RCB261	RCB261-042211	04/22/11	RCB	SD	ST44		RM 1.6 to 2.1 west	Highland Park Wy SW SD	577442	SW Elmgoe St and 10th Ave SW, SE corner	1,266,247.19	197,017.37
RCB262	RCB262-042211	04/22/11	Inline	SD	ST44		RM 3.4 to 3.8 west	1st Ave S SD (west)	881474	MH on west side at 8107 1st Ave S	1,269,448.33	197,061.71
RCB263	RCB263-042911	04/29/11	RCB	SD	SU75, SW05		RM 2.2 to 3.4 west	7th Ave S SD	578517	5th Ave S and S Henderson St, SE corner	1,271,089.50	194,381.29
RCB264	RCB264-042911	04/29/11	RCB	SD	SU75, SW05		RM 4.9 east	Norfolk CSO/SD/PS17 EOF	943725	E side of MLK Jr Way S about 300 ft S of S Norfolk St	1,283,285.58	190,359.39
RCB265	RCB265-042911	04/29/11	RCB	SD	SU75, SW05		RM 4.9 east	Norfolk CSO/SD/PS17 EOF	NA	CB on north side of driveway at 9600 MLK Jr Way S	1,283,201.19	191,869.40
RCB266	RCB266-042911	04/29/11	RCB	SD	SU75, SW05		RM 4.9 east	Norfolk CSO/SD/PS17 EOF	578923	W side of 39th Ave S just north of S Benefit St	1,282,048.00	193,028.70
RCB267	RCB267-051311	05/13/11	RCB	SD	SW81, E1100546	✓	RM 3.8 to 4.2 west	S 96th St SD	NA	E side of 1st Ave SW, north of SW 102nd St	1,269,227.75	190,475.92
RCB268	RCB268-051311	05/13/11	RCB	SD	SW81, E1100546	✓	RM 3.8 to 4.2 west	S 96th St SD	NA	4th Ave S and S 112th St, SW corner	1,270,970.75	187,079.31
RCB269	RCB269-051311	05/13/11	RCB	SD	SW81, E1100546	✓	RM 3.8 to 4.2 west	S 96th St SD	NA	9th Ave S and S 104th St, NE corner	1,273,584.38	190,312.08
RCB270	RCB270-051311	05/13/11	RCB	SD	SW81, E1100546	✓	RM 4.2 to 4.8 west	Hamm Creek	NA	E shoulder of 14th Ave S, approx 100 yds north of S 112th St	1,274,182.50	187,528.94
RCB271	RCB271-051311	05/13/11	RCB	SD	SW81, E1100546	✓	RM 3.8 to 4.2 west	S 96th St SD	NA	10th Ave S and S 124th St, NE corner	1,272,754.74	183,110.69
RCB272	RCB272-051311	05/13/11	RCB	SD	SW84, E1100547	✓	RM 3.8 to 4.2 west	S 96th St SD	NA	Duplicate of RCB268	1,270,970.75	187,079.31
RCB159	RCB159-052011-0	05/20/11	Soil	SD	SX83		RM 2.2 to 3.4 west	7th Ave S SD	NA	5th Ave S and S Monroe St, ML#2, 2 ft W of gate post, 4 ft off of fenceline	1,271,277.96	197,401.60
RCB159	RCB159-052011-3	05/20/11	Soil	SD	SX83		RM 2.2 to 3.4 west	7th Ave S SD	NA	5th Ave S and S Monroe St, ML#2, 2 ft W of gate post, 4 ft off of fenceline	1,271,277.96	197,401.60
RCB159	RCB159-052011-12	05/20/11	Soil	SD	SX83		RM 2.2 to 3.4 west	7th Ave S SD	NA	5th Ave S and S Monroe St, ML#2, 2 ft W of gate post, 4 ft off of fenceline	1,271,277.96	197,401.60
RCB273	RCB273-052011-0	05/20/11	Soil	SD	SX83		RM 2.2 to 3.4 west	7th Ave S SD	NA	5th Ave S and S Monroe St, ML#1, soil midway across property frontage, 25 ft from	1,271,227.41	197,403.95
RCB273	RCB273-052011-3	05/20/11	Soil	SD	SX83		RM 2.2 to 3.4 west	7th Ave S SD	NA	5th Ave S and S Monroe St, ML#1, soil midway across property frontage, 25 ft from	1,271,227.41	197,403.95
RCB273	RCB273-052011-12	05/20/11	Soil	SD	SX83		RM 2.2 to 3.4 west	7th Ave S SD	NA	5th Ave S and S Monroe St, ML#1, soil midway across property frontage, 25 ft from	1,271,227.41	197,403.95
RCB274	RCB274-052011-0	05/20/11	Soil	SD	SX83		RM 2.2 to 3.4 west	7th Ave S SD	NA	5th Ave S and S Monroe St, ML#1 duplicate of RCB 273-0	1,271,227.41	197,403.95
RCB274	RCB274-052011-3	05/20/11	Soil	SD	SX83		RM 2.2 to 3.4 west	7th Ave S SD	NA	5th Ave S and S Monroe St, ML#1 duplicate of RCB 273-3	1,271,227.41	197,403.95
RCB274	RCB274-052011-12	05/20/11	Soil	SD	SX83		RM 2.2 to 3.4 west	7th Ave S SD	NA	5th Ave S and S Monroe St, ML#1 duplicate of RCB 273-12	1,271,227.41	197,403.95
RCB275	RCB275-052011-0	05/20/11	Soil	SD	SX83		RM 2.2 to 3.4 west	7th Ave S SD	NA	5th Ave S and S Monroe St, ML#3, 14' W of adjacent bldg, 5.5 ft off of fenceline	1,271,344.59	197,401.87
RCB275	RCB275-052011-3	05/20/11	Soil	SD	SX83		RM 2.2 to 3.4 west	7th Ave S SD	NA	5th Ave S and S Monroe St, ML#3, 14' W of adjacent bldg, 5.5 ft off of fenceline	1,271,344.59	197,401.87
RCB275	RCB275-052011-12	05/20/11	Soil	SD	SX83		RM 2.2 to 3.4 west	7th Ave S SD	NA	5th Ave S and S Monroe St, ML#3, 14' W of adjacent bldg, 5.5 ft off of fenceline	1,271,344.59	197,401.87
RCB37	RCB37-020211	02/02/11	RCB	SD								

Table 1: Ecology interagency agreement: sampling locations (2010-2011).

Station ID	Sample No.	Date	Type	Sewer	Lab Ref	Dioxin	EAA/SCA	Outfall	Structure #	Location	Xcoord	Ycoord
MH101	MH101-110411	11/04/11	Inline	SD	TV56		RM 2.0 to 2.3 east	S Brighton St CSO/SD	599157	Fox Ave S and S Brighton St, NW corner	1,271,076.59	201,126.61
MH14	MH14-111411	11/14/11	Inline	SD	TW91		RM 0.1 to 0.9 east	Diagonal Ave S CSO/SD	597347	Diagonal Ave S, east of 2nd Ave S, 132-inch mainline	1,270,626.65	210,148.22
ARCHIVED SAMPLES SUBMITTED FOR DIOXIN ANALYSIS												
1st-ST1	1st-ST1-110410-G	11/04/10	Inline	SD	E1100374	✓	RM 3.4 to 3.8 west	1st Ave S SD (west)	NA	1st Ave S pond, N side of S Holden St--SR99 inlet	1,269,790.80	198,570.70
1st-ST3	1st-ST3-111110-G	11/11/10	Inline	SD	E1100373	✓	RM 3.4 to 3.8 west	1st Ave S SD (west)	NA	SW Kenyon St at 4th Ave SW	1,267,991.38	197,680.32
96-ST2	96-ST2-120110-G	12/01/11	Inline	SD	E1100455	✓	RM 3.8 to 4.2 west	S 96th St SD	NA	S 96th St just east of W Marginal Pl S	1,275,063.56	192,278.28
HC-ST1	HC-ST1-110410	11/04/10	Trap	SD	E1100374	✓	RM 4.2 to 4.8 west	Hamm Creek	NA	Where Hamm Cr crosses under Des Moines Memorial Dr S	1,275,382.75	190,530.64
HC-ST1	HC-ST1-110410-G	11/04/10	Inline	SD	E1100374	✓	RM 4.2 to 4.8 west	Hamm Creek	NA	Where Hamm Cr crosses under Des Moines Memorial Dr S	1,275,382.75	190,530.64
ID-ST2	ID-ST2-111810-G	11/18/10	Inline	SD	E1100371	✓	RM 0.0 to 1.0 west	SW Idaho St SD	NA	SW Idaho St just east of W Marginal Wy SW	1,265,316.19	209,904.80
KCIA1-ST1	KCIA1-ST1-120310-G	12/03/10	Inline	SD	E1100370	✓	RM 3.9 to 4.3 east	KCIA SD#1	KC #1060	KCIA SD#1 at 9010 E Marginal Way S	1,278,114.80	193,883.20
KCIA2-ST1	KCIA2-ST1-120310-G	12/03/10	Inline	SD	E1100370	✓	RM 3.7 to 3.9 east	KCIA SD#2/PS45 EOF	NA	KCIA SD #2 at S 87th Pl and E Marginal Way S, downstream of pump station	1,277,685.38	194,822.09
ST1	ST1-043010	04/30/10	Trap	SD	E1100380	✓	RM 0.1 to 0.9 east	Diagonal Ave S CSO/SD	697233	S Oregon St, W of E Marginal Wy S	1,268,420.85	209,048.79
ST1	ST1-043010-G	04/30/10	Inline	SD	E1100372	✓	RM 0.1 to 0.9 east	Diagonal Ave S CSO/SD	697233	S Oregon St, W of E Marginal Wy S	1,268,420.85	209,048.79
ST3	ST3-043010	04/30/10	Trap	SD	E1100372	✓	RM 0.1 to 0.9 east	Diagonal Ave S CSO/SD	NA	S Forest St off ramp, approx. 340 ft E of Airport Wy S	1,272,823.43	214,263.28
ST5	ST5-043010	04/30/10	Trap	SD	E1100372	✓	RM 0.1 to 0.9 east	Diagonal Ave S CSO/SD	712275	S College St east of Rainier Ave S	1,278,219.97	216,092.51

SOURCE TRACING: ATTEMPTED BUT NO SAMPLE^a

MH	02/02/11	Inline			RM 0.0 to 1.0 west	SW Idaho St SD	884458	17th Ave SW between SW Juneau St and SW Brandon St				
MH	02/02/11	Inline			RM 0.0 to 1.0 west	SW Idaho St SD	713364	17th Ave SW at SW Brandon St				
MH	02/02/11	Inline			RM 0.0 to 1.0 west	SW Idaho St SD	884465	17th Ave SW at SW Juneau St				
MH	02/02/11	Inline			RM 0.0 to 1.0 west	SW Idaho St SD	713603	17th Ave SW at SW Graham St				
MH	02/16/11	Inline			RM 0.0 to 1.0 west	SW Idaho St SD	713533	16th Ave SW at S Seattle Comm. Coll.				
MH	02/16/11	Inline			RM 0.0 to 1.0 west	SW Idaho St SD	598635	16th Ave SW at S Seattle Comm. Coll.				
MH	02/16/11	Inline			RM 0.1 to 0.9 east	Diagonal Ave S CSO/SD	697861	Airport Way S at S Edmonds St				
MH	03/11/11	Inline			RM 4.9 east	WSDOT S Ryan St SD	MH215	E.Marginal Way S, north of S Boeing Access Rd				
RCB	03/24/11	RCB				West Seattle study area	WS5-572377	Beach Dr SW and SW Oregon St				
RCB	03/24/11	RCB				West Seattle study area	WS6-574904	Beach DR SW				
RCB	04/01/11	RCB			RM 2.3 to 2.8 east	Georgetown study area	GT2-575426	Northeast corner of Carlton Ave S and S Warsw St				
RCB	04/01/11	RCB			RM 2.3 to 2.8 east	Georgetown study area	GT3-907658	Across from GT2				
RCB	04/01/11	RCB			RM 0.1 to 0.9 east	Diagonal Ave S CSO/SD	Diag-W1-1524939	On 4th St, heading southbound before Industrial Way				
RCB	04/01/11	RCB			RM 0.1 to 0.9 east	Diagonal Ave S CSO/SD	Diag-W2-572690	Beneath the 4th Ave Bridge adjacent to the COSTCO fueling station				
RCB	04/01/11	RCB			RM 0.1 to 0.9 east	Diagonal Ave S CSO/SD	Diag-W6-930406	On the corner of 6th Ave S and S Spokane St				
RCB	04/08/11	RCB			RM 0.1 to 0.9 east	Diagonal Ave S CSO/SD	Diag-M5-572577	S Columbian St between S Snoqualmie St and S Angeline (south side of street)				
RCB	04/08/11	RCB			RM 0.1 to 0.9 east	Diagonal Ave S CSO/SD	Diag-E2-566927	S King St and 25th Ave S				
RCB	04/08/11	RCB			RM 0.1 to 0.9 east	Diagonal Ave S CSO/SD	Diag-E3-567360	In Judkins Park (near 21st and Charles St)				
RCB	04/13/11	RCB			RM 0.0 to 1.0 west	SW Idaho St SD	all onsite CBs	General Recycling, West Marginal Way SW at SW Idaho St				
RCB	04/20/11	RCB			RM 0.1 to 0.9 east	Diagonal Ave S CSO/SD	ResCB2, 565502	22nd Ave and E James St				
RCB	04/20/11	RCB			RM 0.1 to 0.9 east	Diagonal Ave S CSO/SD	ResCB3, 565693	23rd Ave and E Jefferson St				
RCB	04/20/11	RCB			RM 0.1 to 0.9 east	Diagonal Ave S CSO/SD	ResCB4, 565893	23rd Ave and E Terrace St				
RCB	04/29/11	RCB			RM 4.9 east	Norfolk CSO/SD/PS17 EOF	600647	MLK Jr. Way S near Merton Way S				
RCB	04/29/11	RCB			RM 4.9 east	Norfolk CSO/SD/PS17 EOF	714620	MLK Jr. Way S near Merton Way S				
CB	05/02/11	CB			RM 4.9 east	Norfolk CSO/SD/PS17 EOF	?	MLK Jr. Way S just south of S Norfolk St, on Coluccio Yard				
RCB	04/13/11	RCB			RM 3.8 to 4.2 west	S 96th St SD	779660	SE corner of S Barton St and 10 Ave S, Puget Sound Coatings souce tracing				
RCB	04/13/11	RCB			RM 3.8 to 4.2 west	S 96th St SD	open channel	west side of 10th Ave S between S Barton and S Cambridge St				
RCB	05/13/11	RCB				S 96th St SD and Hamm Cr	?	Aqua Way S at 4th Ave S				

Samples shown in red are field splits/duplicates.

a. Sampling attempted, but insufficient sediment present.

Table 2: Ecology interagency agreement (2010-2011): SPU source tracing sample results (dry weight).

Sample ID	SQS/ LAET	CSL/ 2LAET	1ST-ST1	1ST-ST1	1ST-ST2	1ST-ST2	1st-ST3	1st-ST3	1st-ST7	7th-ST1	ID-ST3	ID-ST3	HC-ST1	HC-ST1	7th-ST1
Outfall			1st Ave S SD (west)	7th Ave S SD	SW Idaho St SD	SW Idaho St SD	Hamm Creek	Hamm Creek	7th Ave S SD						
Sample type			Trap SD	Inline SD	Trap SD	Inline SD	Trap SD	Inline SD	Trap SD	Inline SD	Trap SD	Inline SD	Trap SD	Inline SD	Trap SD
Conveyance type ^c			RW15, RV25	RW15, RV25	RW15, RV25	RW15, RV25	RW33	RW33	RW33	RZ02, SA02, SA03	RW15, RV25	RW15, RV25	RW15, RV25	RW15, RV25	RW15, RV25
Lab reference															
Date	11/04/10	11/04/10	11/04/10	11/04/10	11/11/10	11/11/10	11/11/10	12/01/10	11/04/10	11/04/10	11/04/10	11/04/10	11/04/10	12/01/10	
Total solids (%)	49.3	64.9	49.0	74.1	64.1	80.0	40.5	50.7	78.6	58.3	50.8	79.0	38.6		
TOC (%)	7.89	7.60	5.54	3.43	5.33	1.42	15.10	6.43	2.90	3.09	1.26	0.78	8.59		
Metals (mg/kg dw)															
Arsenic	57	93	10	8 U	10 U	6 U	8 U	6	10 U	16	9 U	9	6 U	6 U	20
Copper	390	390	180	133	96	20	40	33	125	211	34	31	23	12	198
Lead	450	530	93	42	111	25	8	9	197	180	52	39	18	8	127
Mercury	0.41	0.59	0.16	0.12	0.11	0.02 U	0.03	0.04	0.13	0.19	0.11	0.09	0.04	0.11	0.18
Zinc	410	960	793	370	466	108	147	183	662	787	270	154	65	60	776
Total petroleum hydrocarbons (mg/kg dw)															
TPH-diesel	2,000 ^b	2,000 ^b	760	300	170	64 U	78 U	62 U	680	490	97 U	77 U	63 U	60 U	890
TPH-oil	2,000 ^b	2,000 ^b	5,900	2,500	1,500	330	330	160	5,500	2,800	280	150 U	130 U	120 U	5,000
LPAH (ug/kg dw)															
Acenaphthene	500	500	200 U	140 U	130 U	20 U	67 U	58 U	460 U	150 U	20 U	20 U	20 U	20 U	220 U
Acenaphthylene	1,300	1,300	200 U	140 U	130 U	20 U	67 U	58 U	460 U	150 U	20 U	20 U	20 U	20 U	220 U
Anthracene	960	960	380	140 U	130 U	20 U	42 J	58 U	260 J	150 U	20 U	20 U	20 U	20 U	150 J
Fluorene	540	540	160 J	140 U	130 U	20 U	67 U	58 U	460 U	150 U	20 U	20 U	20 U	20 U	220 U
Naphthalene	2,100	2,100	200 U	140 U	130 U	10 J	67 U	58 U	460 U	150 U	20 U	20 U	20 U	20 U	220 U
Phenanthrene	1,500	1,500	2,000	240	260	25	310	200	2,400	280	42	10 J	25	17 J	370
Total LPAH	5,200	5,200	2,540 J	240	260	35 J	352	200	2,660 J	280	42	10 J	25	17 J	520 J
HPAH (ug/kg dw)															
Benzo(a)anthracene	1,300	1,600	810	190	210	22	260	120	1,200	290	23	20 U	15 J	10 J	300
Benzo(a)pyrene	1,600	1,600	1,100	280	330	28	300	130	2,500	440	41	16 J	16 J	14 J	400
Total benzofluoranthenes	3,200	3,600	440	180	190	18 J	120	57 J	1,500	330	20 U	20 U	20 U	20 U	400
Benzo(g,h,i)perylene	670	720	2,300	670	740	72	660	270	4,800	930	88	32	27	27	1,100
Chrysene	1,400	2,800	1,600	420	450	47	380	160	3,100	500	54	19 J	21	16 J	850
Dibenz(a,h)anthracene	230	230	200 U	140 U	130 U	20 U	67 U	58 U	460 U	150 U	20 U	20 U	20 U	20 U	220 U
Fluoranthene	1,700	2,500	3,300	550	670	65	760	360	6,100	800	82	22	34	30	1,200
Indeno(1,2,3-c,d)pyrene	600	690	200 U	110 J	130 J	20 U	120	55 J	1,400	230	20 U	20 U	20 U	20 U	260
Pyrene	2,600	3,300	2,600	600	550	59	560	280	3,900	700	60	16 J	35	24	1,000
Total HPAH	12,000	17,000	12,150	3,000 J	3,270 J	311 J	3,160	1,432 J	24,500	4,220	348	105 J	148 J	121 J	5,510
Phthalates (ug/kg dw)															
Bis(2-ethylhexyl)phthalate	1,300	1,900	11,000 B	4,500 B	6,800 B	570 B	660	220	11,000	2,100 B	520 B	160 B	65 U	30 U	9,300 B
Butylbenzylphthalate	63	900	3,200	90 J	220	11 J	67 U	58 U	460 U	240	57	16 J	20 U	20 U	220 U
Diethylphthalate	200	1,200	200 U	140 U	130 U	52	67 U	58 U	460 U	150 U	20 U	20 U	17 J	20 U	220 U
Dimethylphthalate	71	160	200 U	140 U	130 U	14 J	67 U	58 U	460 U	150 U	20 U	20 U	20 U	20 U	220 U
Di-n-butylphthalate	1,400	1,400	200 U	140 U	130 U	20 U	67 U	58 U	460 U	150 U	20 U	20 U	20 U	20 U	220 U
Di-n-octylphthalate	6,200	NA	200 U	140 U	130 U	20 U	67 U	58 U	460 U	150 U	20 U	20 U	20 U	20 U	220 U
PCBs (ug/kg dw)															
Aroclor 1016			18 U	20 U	18 U	20 U	20 U	19 U	61 U	41 U	20 U	20 U	18 U	19 U	25 U
Aroclor 1221			18 U	20 U	18 U	20 U	20 U	19 U	61 U	41 U	20 U	20 U	18 U	19 U	25 U
Aroclor 1232			18 U	20 U	18 U	20 U	20 U	19 U	61 U	41 U	20 U	20 U	18 U	19 U	25 U
Aroclor 1242			18 U	20 U	18 U	20 U	20 U	19 U	61 U	41 U	20 U	20 U	18 U	19 U	25 U
Aroclor 1248			18 U	25 Y	23 Y	20 U	20 U	19 U	210 Y	41 U	20 U	20 U	33	19 U	110
Aroclor 1254			18 U	39	47	20 U	20 U	19 U	770	160 Y	20 U	20 U	45	19 U	130 Y
Aroclor 1260			18 U	34	28	20 U	20 U	19 U	310 Y	420	20 U	20 U	32	19 U	200
Total PCBs	130	1,000	18 U	73	75	20 U	20 U	19 U	770	420	20 U	20 U	110	19 U	310
Other organic compounds (ug/kg dw)															
1,2,4-Trichlorobenzene			200 U	140 U	130 U	20 U	67 U	58 U	460 U	150 U	20 U	20 U	20 U	20 U	220 U
1,2-Dichlorobenzene			200 U	140 U	130 U	20 U	67 U	58 U	460 U	150 U	20 U	20 U	20 U	20 U	220 U
1,3-Dichlorobenzene			200 U	140 U	130 U	20 U	67 U	58							

Table 2: Ecology interagency agreement (2010-2011): SPU source tracing sample results (dry weight).

Sample ID	SQS/ LAET	CSL/ 2LAET	1ST-ST1	1ST-ST1	1ST-ST2	1ST-ST2	1st-ST3	1st-ST3	1st-ST7	7th-ST1	ID-ST3	ID-ST3	HC-ST1	HC-ST1	7th-ST1
Outfall			1st Ave S SD (west)	7th Ave S SD	SW Idaho St SD	SW Idaho St SD	Hamm Creek	Hamm Creek	7th Ave S SD						
Sample type			Trap SD	Inline SD	Trap SD	Inline SD	Trap SD	Inline SD	Trap SD	Inline SD	Trap SD	Inline SD	Trap SD	Inline SD	Trap SD
Conveyance type ^c			RW15, RV25	RW15, RV25	RW15, RV25	RW15, RV25	RW33	RW33	RW33	RZ02, SA02, SA03	RW15, RV25	RW15, RV25	RW15, RV25	RW15, RV25	RZ02, SA02, SA03
Date			11/04/10	11/04/10	11/04/10	11/04/10	11/11/10	11/11/10	11/11/10	12/01/10	11/04/10	11/04/10	11/04/10	11/04/10	12/01/10
2,4,5-Trichlorophenol			1,000 U	680 U	660 U	100 U	330 U	290 U	2,300 U	770 U	98 U	99 U	99 U	98 U	1,100 U
2,4,6-Trichlorophenol			1,000 U	680 U	660 U	100 U	330 U	290 U	2,300 U	770 U	98 U	99 U	99 U	98 U	1,100 U
2,4-Dichlorophenol			1,000 U	680 U	660 U	100 U	330 U	290 U	2,300 U	770 U	98 U	99 U	99 U	98 U	1,100 U
2,4-Dimethylphenol ^a	29	29	200 U	140 U	130 U	20 U	67 U	58 U	460 U	150 U	20 U	20 U	20 U	20 U	220 U
2,4-Dinitrophenol			2,000 U	1,400 U	1,300 U	200 U	670 U	580 U	4,600 U	1,500 U	200 U	200 U	200 U	200 U	2,200 U
2,4-Dinitrotoluene			1,000 U	680 U	660 U	100 U	330 U	290 U	2,300 U	770 U	98 U	99 U	99 U	98 U	1,100 U
2,6-Dinitrotoluene			1,000 U	680 U	660 U	100 U	330 U	290 U	2,300 U	770 U	98 U	99 U	99 U	98 U	1,100 U
2-Choronaphthalene			200 U	140 U	130 U	20 U	67 U	58 U	460 U	150 U	20 U	20 U	20 U	20 U	220 U
2-Chlorophenol			200 U	140 U	130 U	20 U	67 U	58 U	460 U	150 U	20 U	20 U	20 U	20 U	220 U
2-Methylnaphthalene			200 U	140 U	130 U	20 U	67 U	58 U	460 U	150 U	20 U	20 U	20 U	20 U	220 U
2-Methylphenol ^a	63	63	200 U	140 U	130 U	20 U	67 U	58 U	460 U	150 U	20 U	20 U	20 U	20 U	220 U
2-Nitroaniline			1,000 U	680 U	660 U	100 UJ	330 U	290 U	2,300 U	770 U	98 UJ	99 U	99 U	98 U	1,100 U
2-Nitrophenol			200 U	140 U	130 U	20 U	67 U	58 U	460 U	150 U	20 U	20 U	20 U	20 U	220 U
3,3'-Dichlorobenzidine			1,000 U	680 U	660 U	100 U	330 U	290 U	2,300 U	770 U	98 U	99 U	99 U	98 U	1,100 U
3-Nitroaniline			1,000 U	680 U	660 U	100 U	330 U	290 U	2,300 U	770 U	98 U	99 U	99 U	98 U	1,100 U
4,6-Dinitro-2-methylphenol			2,000 U	1,400 U	1,300 U	200 U	670 U	580 U	4,600 U	1,500 U	200 U	200 U	200 U	200 U	2,200 U
4-Bromophenyl-phenylether			200 U	140 U	130 U	20 U	67 U	58 U	460 U	150 U	20 U	20 U	20 U	20 U	220 U
4-Chloro-3-methylphenol			1,000 U	680 U	660 U	100 U	330 U	290 U	2,300 U	770 U	98 U	99 U	99 U	98 U	1,100 U
4-Chloroaniline			1,000 U	680 U	660 U	100 U	330 U	290 U	2,300 U	770 U	98 U	99 U	99 U	98 U	1,100 U
4-Chlorophenyl-phenylether			200 U	140 U	130 U	20 U	67 U	58 U	460 U	150 U	20 U	20 U	20 U	20 U	220 U
4-Methylphenol ^a	670	670	120 J	140 U	130 U	20 U	86	41 J	410 J	150 U	13 J	20 U	20 U	20 U	220 U
4-Nitroaniline			1,000 UJ	680 UJ	660 UJ	100 UJ	330 UJ	290 UJ	2,300 UJ	770 U	98 UJ	99 UJ	99 UJ	98 UJ	1,100 U
4-Nitrophenol			1,000 U	680 U	660 U	100 UJ	330 U	290 U	2,300 U	770 U	98 UJ	99 U	99 U	98 U	1,100 U
Benzoic acid ^a	650	650	430 J	1,400 U	750 J	200 U	670 U	580 U	4,600 U	1,500 U	110 J	87 J	200 U	200 U	2,200 U
Benzyl alcohol ^a	57	73	200 UJ	140 UJ	130 UJ	20 U	67 U	58 U	460 U	770 UJ	44	20 UJ	20 UJ	20 UJ	1,100 UJ
bis(2-Chloroethoxy) methane			200 U	140 U	130 U	20 U	67 U	58 U	460 U	150 U	20 U	20 U	20 U	20 U	220 U
Bis-(2-chloroethyl) ether			200 U	140 U	130 U	20 U	67 U	58 U	460 U	150 U	20 U	20 U	20 U	20 U	220 U
Carbazole			190 J	140 U	130 U	20 U	60 J	58 U	400 J	150 U	20 U	20 U	20 U	20 U	220 U
Dibenzofuran	540	540	200 U	140 U	130 U	20 U	67 U	58 U	460 U	150 U	20 U	20 U	20 U	20 U	220 U
Hexachlorobenzene	22	70	200 U	140 U	130 U	20 U	67 U	58 U	460 U	150 U	20 U	20 U	20 U	20 U	220 U
Hexachlorobutadiene	11	120	200 U	140 U	130 U	20 U	67 U	58 U	460 U	150 U	20 U	20 U	20 U	20 U	220 U
Hexachlorocyclopentadiene			1,000 U	680 U	660 U	100 U	330 U	290 U	2,300 U	770 U	98 U	99 U	99 U	98 U	1,100 U
Hexachloroethane			200 U	140 U	130 U	20 U	67 U	58 U	460 U	150 U	20 U	20 U	20 U	20 U	220 U
Isophorone			200 U	140 U	130 U	20 U	67 U	58 U	460 U	150 U	20 U	20 U	20 U	20 U	220 U
Nitrobenzene			200 U	140 U	130 U	20 U	67 U	58 U	460 U	150 U	20 U	20 U	20 U	20 U	220 U
N-Nitroso-di-n-propylamine			200 U	140 U	130 U	20 U	67 U	58 U	460 U	150 U	20 U	20 U	20 U	20 U	220 U
N-Nitrosodiphenylamine	28	40	200 U	140 U	130 U	20 U	67 U	58 U	460 U	150 U	20 U	20 U	20 U	20 U	220 U
Pentachlorophenol ^a	360	690	1,000 U	680 U	660 U	100 U	330 U	290 U	2,300 U	770 U	98 U	99 U	99 U	98 U	1,100 U
Phenol ^a	420	1,200	200 U	140 U	130 U	20 U	67 U	58 U	460 U	150 U	20 U	20 U	20 U	20 U	220 U

a. Sediment management standards based on dry weight concentration.

b. Sediment quality standard/lowest apparent effects threshold

c. Cleanup screening level/second lowest apparent effects threshold

d. MTCA Method A soil cleanup level

Bold = Compound detected in sample.

J = Value is an estimate

U = Target analyte not detected at the reported concentration

R = Analytical result is rejected and cannot be used.

Y = Analyte is not detected at or above the reported concentration. The reporting limit is raised due to chromatographic interference. Y flag is equivalent to U flag with a raised reporting limit.

RCB = Right-of-way catch basin

CB = Onsite catch basin

CSS = Combined sewer system

Inline = Inline grab sample

Dirt = Street dirt sample

Exceeds SQS/LAET/MTCA Method A

Exceeds CSL/2LAET

Table 2: Ecology interagency agreement (2010-2011): SPU source tracing sample results (dry weight).

Sample ID	SQS/ LAET	CSL/ 2LAET	7th-ST2	7th-ST2	7th-ST3	7th-ST3	HP-ST4	HP-ST6	HP-ST6	96-ST1	96-ST1	96-ST2	96-ST2	96-ST3	96-ST3	
Outfall			7th Ave S SD	7th Ave S SD	7th Ave S SD	7th Ave S SD	Highland Park Wy SW SD	Highland Park Wy SW SD	Highland Park Wy SW SD	S 96th St SD	S 96th St SD	S 96th St SD	S 96th St SD	S 96th St SD	S 96th St SD	
Sample type			Trap SD	Inline SD	Trap SD	Inline SD	Trap SD	Trap SD	Inline SD	Trap SD	Inline SD	Trap SD	Trap SD	Trap SD	Inline SD	
Conveyance type ^c			RW33	RW33	RW33	RW33	RW33	RX79, RZ07	RX79, RZ07	RZ02, SA02, SA03	RZ02, SA02, SA03	RZ02, SA02, SA03	RZ02, SA02, SA03	RZ17	RZ17	
Lab reference																
Date			11/11/10	11/11/10	11/11/10	11/11/10	11/11/10	11/18/10	11/18/10	12/01/10	12/01/10	12/01/10	12/01/10	12/03/10	12/03/10	
Total solids (%)			37.4	81.6	28.9	63.1	63.1	38.6	37.1	58.1	74.1	58.6	45.5	36.4	76.4	
TOC (%)			7.79	0.49	10.80	6.68	6.68	7.04	10.20	5.89	0.77	4.62	9.13	2.89	0.63	
Metals (mg/kg dw)																
Arsenic	57	93	30	6 U	30	8 U	8 U	28.9	30	9 U	7	16	30	10 U	6 U	
Copper	390	390	29	9	139	38	38	103	166	56	14	49	81	38 J	9 J	
Lead	450	530	33	4	110	35	35	130	167	63	14	60	96	37 J	5 J	
Mercury	0.41	0.59	0.09	0.02 U	0.19	0.03 U	0.03 U	0.36	0.33	0.04	0.02 U	0.05	0.10	0.07	0.03 U	
Zinc	410	960	216	50	724	160	160	662	928	593	267	746	669	1,110 J	38 J	
Total petroleum hydrocarbons (mg/kg dw)																
TPH-diesel	2,000 ^b	2,000 ^b	130 U	64 U	170 U	79 U	79 U	300	410	76	62 U	73 U	410		62 U	
TPH-oil	2,000 ^b	2,000 ^b	270 U	130 U	640	600	600	1,900	2,600	480	120 U	410	2,100		120 U	
LPAH (ug/kg dw)																
Acenaphthene	500	500	59 U	20 U	220 U	79 U	79 U	140 J	270 U	89 U	20 U	110	240 U	36 U	19 U	
Acenaphthylene	1,300	1,300	59 U	20 U	220 U	79 U	79 U	210 U	270 U	89 U	20 U	92 U	240 U	36 U	19 U	
Anthracene	960	960	59 U	20 U	220 U	79 U	79 U	210 U	270 U	89 U	20 U	290	210 J	36 U	19 U	
Fluorene	540	540	59 U	20 U	220 U	79 U	79 U	210 U	270 U	89 U	20 U	140	240 U	36 U	19 U	
Naphthalene	2,100	2,100	59 U	20 U	220 U	79 U	79 U	210 U	270 U	89 U	20 U	92 U	240 U	36 U	19 U	
Phenanthrene	1,500	1,500	32 J	20 U	290	140	140	280	550	190	21	1,200	1,100	90	19 U	
Total LPAH	5,200	5,200	32 J	20 U	290	140	140	420 J	550	190	21	1,740	1,310 J	90	19 U	
HPAH (ug/kg dw)																
Benzo(a)anthracene	1,300	1,600	59 U	20 U	240	78 J	78 J	240	460	150	17 J	610	700	110	19 U	
Benzo(a)pyrene	1,600	1,600	33 J	20 U	300	92	92	300	630	190	17 J	550	770	130	19 U	
Total benzofluoranthenes	3,200	3,600	59 U	20 U	310	56 J	56 J	220	550	150	13 J	270	610	120	19 U	
Benzo(g,h,i)perylene	670	720	60	20 U	760	200	200	780	1,500	370	36	1,000	1,500	270	19 U	
Chrysene	1,400	2,800	43 J	20 U	550	140	140	570	880	270	22	680	1,000	170	19 U	
Dibenz(a,h)anthracene	230	230	59 U	20 U	220 U	79 U	79 U	210 U	270 U	89 U	20 U	92 U	240 U	36 U	19 U	
Fluoranthene	1,700	2,500	60	20 U	750	270	270	920	1,600	460	46	1,700	2,100	330	14 J	
Indeno(1,2,3-c,d)pyrene	600	690	59 U	20 U	190 J	79 U	79 U	210 U	390	120	11 J	270	490	96	19 U	
Pyrene	2,600	3,300	59	20 U	690	220	220	760	1,300	300	32	1,100	1,500	220	19 U	
Total HPAH	12,000	17,000	255 J	20 U	3,790 J	1,056 J	1,056 J	3,790	7,310	2,010	194 J	6,180	8,670	1,446	14 J	
Phthalates (ug/kg dw)																
Bis(2-ethylhexyl)phthalate	1,300	1,900	150	17 J	7,000	1,400	1,400	6,500 B	9,900 B	1,100 B	130 U	730 B	4,500 B	1,100 B	40 U	
Butylbenzylphthalate	63	900	38 J	20 U	410	79 U	79 U	400	660	85 J	20 U	100	550	91	19 U	
Diethylphthalate	200	1,200	59 U	20 U	220 U	79 U	79 U	210 U	270 U	89 U	29 U	92 U	240 U	36 U	20 U	
Dimethylphthalate	71	160	59 U	20 U	220 U	79 U	79 U	210 U	270 U	89 U	20 U	92 U	130 J	36 U	19 U	
Di-n-butylphthalate	1,400	1,400	59 U	20 U	220 U	79 U	79 U	210 U	190 J	89 U	20 U	92 U	240 U	48	19 U	
Di-n-octylphthalate	6,200	NA	59 U	20 U	220 U	79 U	79 U	210 U	270 U	89 U	20 U	92 U	240 U	36 U	19 U	
PCBs (ug/kg dw)																
Aroclor 1016			19 U	19 U	34 U	20 U	20 U	20 U	20 U	20 U	19 U	20 U	20 U	20 U	19 U	
Aroclor 1221			19 U	19 U	34 U	20 U	20 U	20 U	20 U	20 U	19 U	20 U	20 U	20 U	19 U	
Aroclor 1232			19 U	19 U	34 U	20 U	20 U	20 U	20 U	20 U	19 U	20 U	20 U	20 U	19 U	
Aroclor 1242			19 U	19 U	34 U	20 U	20 U	20 U	20 U	20 U	19 U	20 U	20 U	20 U	19 U	
Aroclor 1248			19 U	19 U	34 U	20 U	20 U	20 U	100	110	20 U	19 U	20 U	20 U	19 U	
Aroclor 1254			19 U	19 U	51 Y	20 U	20 U	20 U	52	63	28	19 U	20 U	37	20 U	19 U
Aroclor 1260			19 U	19 U	70	20 U	20 U	20 U	72	20 U	19 U	20 U	20 U	25	20 U	19 U
Total PCBs	130	1,000	19 U	19 U	70	20 U	20 U	152	245	28	19 U	20 U	62	20 U	1	

Table 2: Ecology interagency agreement (2010-2011): SPU source tracing sample results (dry weight).

Sample ID	SQS/ LAET	CSL/ 2LAET	7th-ST2	7th-ST2	7th-ST3	7th-ST3	HP-ST4	HP-ST6	HP-ST6	96-ST1	96-ST1	96-ST2	96-ST2	96-ST3	96-ST3
Outfall			7th Ave S SD	7th Ave S SD	7th Ave S SD	7th Ave S SD	Highland Park Wy SW SD	Highland Park Wy SW SD	Highland Park Wy SW SD	S 96th St SD	S 96th St SD	S 96th St SD	S 96th St SD	S 96th St SD	S 96th St SD
Sample type			Trap SD	Inline SD	Trap SD	Inline SD	Trap SD	Trap SD	Inline SD	Trap SD	Inline SD	Trap SD	Trap SD	Trap SD	Inline SD
Conveyance type^c			RW33	RW33	RW33	RW33	RW33	RX79, RZ07	RX79, RZ07	RZ02, SA02, SA03	RZ02, SA02, SA03	RZ02, SA02, SA03	RZ02, SA02, SA03	RZ17	RZ17
Date			11/11/10	11/11/10	11/11/10	11/11/10	11/11/10	11/18/10	11/18/10	12/01/10	12/01/10	12/01/10	12/01/10	12/03/10	12/03/10
2,4,5-Trichlorophenol			300 U	97 U	1,100 U	400 U	400 U	1,100 U	1,400 U	440 U	97 U	460 U	1,200 U	180 U	97 U
2,4,6-Trichlorophenol			300 U	97 U	1,100 U	400 U	400 U	1,100 U	1,400 U	440 U	97 U	460 U	1,200 U	180 U	97 U
2,4-Dichlorophenol			300 U	97 U	1,100 U	400 U	400 U	1,100 U	1,400 U	440 U	97 U	460 U	1,200 U	180 U	97 U
2,4-Dimethylphenol ^a	29	29	59 U	20 U	220 U	79 U	79 U	210 U	270 U	89 U	20 U	92 U	240 U	36 U	19 U
2,4-Dinitrophenol			590 U	200 U	2,200 U	790 U	790 U	2,100 U	2,700 U	890 U	200 U	920 U	2,400 U	360 U	190 U
2,4-Dinitrotoluene			300 U	97 U	1,100 U	400 U	400 U	1,100 U	1,400 U	440 U	97 U	460 U	1,200 U	180 U	97 U
2,6-Dinitrotoluene			300 U	97 U	1,100 U	400 U	400 U	1,100 U	1,400 U	440 U	97 U	460 U	1,200 U	180 U	97 U
2-Choronaphthalene			59 U	20 U	220 U	79 U	79 U	210 U	270 U	89 U	20 U	92 U	240 U	36 U	19 U
2-Chlorophenol			59 U	20 U	220 U	79 U	79 U	210 U	270 U	89 U	20 U	92 U	240 U	36 U	19 U
2-Methylnaphthalene			59 U	20 U	220 U	79 U	79 U	210 U	270 U	89 U	20 U	92 U	240 U	36 U	19 U
2-Methylphenol ^a	63	63	59 U	20 U	220 U	79 U	79 U	210 U	270 U	89 U	20 U	92 U	240 U	36 U	19 U
2-Nitroaniline			300 U	97 U	1,100 U	400 U	400 U	1,100 U	1,400 U	440 U	97 U	460 U	1,200 U	180 U	97 U
2-Nitrophenol			59 U	20 U	220 U	79 U	79 U	210 U	270 U	89 U	20 U	92 U	240 U	36 U	19 U
3,3'-Dichlorobenzidine			300 U	97 U	1,100 U	400 U	400 U	1,100 U	1,400 U	440 U	97 U	460 U	1,200 U	180 U	97 U
3-Nitroaniline			300 U	97 U	1,100 U	400 U	400 U	1,100 U	1,400 U	440 U	97 U	460 U	1,200 U	180 U	97 U
4,6-Dinitro-2-methylphenol			590 U	200 U	2,200 U	790 U	790 U	2,100 U	2,700 U	890 U	200 U	920 U	2,400 U	360 U	190 U
4-Bromophenyl-phenylether			59 U	20 U	220 U	79 U	79 U	210 U	270 U	89 U	20 U	92 U	240 U	36 U	19 U
4-Chloro-3-methylphenol			300 U	97 U	1,100 U	400 U	400 U	1,100 U	1,400 U	440 U	97 U	460 U	1,200 U	180 U	97 U
4-Chloroaniline			300 U	97 U	1,100 U	400 U	400 U	1,100 U	1,400 U	440 U	97 U	460 U	1,200 U	180 U	97 U
4-Chlorophenyl-phenylether			59 U	20 U	220 U	79 U	79 U	210 U	270 U	89 U	20 U	92 U	240 U	36 U	19 U
4-Methylphenol ^a	670	670	59 U	20 U	220 U	59 J	59 J	210 U	270 U	89 U	20 U	92 U	240 U	36 U	19 U
4-Nitroaniline			300 UJ	97 UJ	1,100 UJ	400 UJ	400 UJ	1,100 UJ	1,400 UJ	440 U	97 U	460 U	1,200 U	180 U	97 U
4-Nitrophenol			300 U	97 U	1,100 U	400 U	400 U	1,100 U	1,400 U	440 U	97 U	460 U	1,200 U	180 U	97 U
Benzoic acid ^a	650	650	140 J	200 U	2,200 U	790 U	790 U	2,100 U	2,700 U	890 U	200 U	920 U	2,400 U	130 J	190 U
Benzyl alcohol ^a	57	73	59 U	20 U	220 U	430	430	210 U	270 U	440 UJ	97 UJ	460 UJ	1,200 UJ	180 UJ	R
bis(2-Chloroethoxy) methane			59 U	20 U	220 U	79 U	79 U	210 U	270 U	89 U	20 U	92 U	240 U	36 U	19 U
Bis-(2-chloroethyl) ether			59 U	20 U	220 U	79 U	79 U	210 U	270 U	89 U	20 U	92 U	240 U	36 U	19 U
Carbazole			59 U	20 U	220 U	79 U	79 U	210 U	270 U	89 U	20 U	140	180 J	36 U	19 U
Dibenzofuran	540	540	59 U	20 U	220 U	79 U	79 U	210 U	270 U	89 U	20 U	64 J	240 U	36 U	19 U
Hexachlorobenzene	22	70	59 U	20 U	220 U	79 U	79 U	210 U	270 U	89 U	20 U	92 U	240 U	36 U	19 U
Hexachlorobutadiene	11	120	59 U	20 U	220 U	79 U	79 U	210 U	270 U	89 U	20 U	92 U	240 U	36 U	19 U
Hexachlorocyclopentadiene			300 U	97 U	1,100 U	400 U	400 U	1,100 U	1,400 U	440 U	97 U	460 U	1,200 U	180 U	97 U
Hexachloroethane			59 U	20 U	220 U	79 U	79 U	210 U	270 U	89 U	20 U	92 U	240 U	36 U	19 U
Isophorone			59 U	20 U	220 U	79 U	79 U	210 U	270 U	89 U	20 U	92 U	240 U	36 U	19 U
Nitrobenzene			59 U	20 U	220 U	79 U	79 U	210 U	270 U	89 U	20 U	92 U	240 U	36 U	19 U
N-Nitroso-di-n-propylamine			59 U	20 U	220 U	79 U	79 U	210 U	270 U	89 U	20 U	92 U	240 U	36 U	19 U
N-Nitrosodiphenylamine	28	40	59 U	20 U	220 U	79 U	79 U	210 U	270 U	89 U	20 U	92 U	240 U	36 U	19 U
Pentachlorophenol ^a	360	690	300 U	97 U	1,100 U	400 U	400 U	1,100 U	1,400 U	440 U	97 U	460 U	1,200 U	180 U	97 U
Phenol ^a	420	1,200	59 U	20 U	220 U	79 U	79 U	210 U	270 U	89 U	20 U	92 U	240 U	36 U	19 U

a. Sediment management standards based on dry weight concentration.

b. Sediment quality standard/lowest apparent effects threshold

c. Cleanup screening level/second lowest apparent effects threshold

d. MTCA Method A soil cleanup level

Bold = Compound detected in sample.

J = Value is an estimate

U = Target analyte not detected at the reported concentration

R = Analytical result is rejected and cannot be used.

Y = Analyte is not detected at or above the reported concentration. The reporting limit is raised due to chromatographic interference. Y flag is equivalent to U flag with a raised reporting limit.

RCB = Right-of-way catch basin

CB = Onsite catch basin

CSS = Combined sewer system

Inline = Inline grab sample

Dirt = Street dirt sample

Exceeds SQS/LAET/MTCA Method A

Exceeds CSL/2LAET

Table 2: Ecology interagency agreement (2010-2011): SPU source tracing sample results (dry weight).

Sample ID	SQS/ LAET	CSL/ 2LAET	KCIA1-ST1	KCIA1-ST1	KCIA2-ST1	KCIA2-ST1	ID-ST1	ID-ST2	ID-ST2	KN-ST1	KN-ST1	MH7	MH241	MH242	MH243
Outfall			KCIA SD#1	KCIA SD#1	KCIA SD#2/PS45 EOF	KCIA SD#2/PS45 EOF	SW Idaho St SD	SW Idaho St SD	SW Idaho St SD	SW Kenny St SD/T115 CSO	SW Kenny St SD/T115 CSO	Norfolk CSO/SD/P S17 EOF	2nd Ave S SD	SW Idaho St SD	Diagonal Ave S CSO/SD
Sample type			Trap SD RZ17	Inline SD RZ17	Trap SD RZ17	Inline SD RZ17	Trap SD RX79, RZ07	Trap SD RX79, RZ07	Trap SD RX79, RZ07	Trap SD RX79, RZ07	Trap SD RX79, RZ07	Trap SD RX79, RZ07	Inline SD SV75, SW05	Inline SD SR72	Inline SD SH27
Conveyance type ^c															
Lab reference															
Date			12/03/10	12/03/10	12/03/10	12/03/10	11/18/10	11/18/10	11/18/10	11/18/10	11/18/10	04/29/11	04/13/11	02/02/11	02/16/11
Total solids (%)			38.7	84.7	49.0	18.1	41.6	64.5	60.9	37.7	51.8	45.1	43.5	74.2	52.0
TOC (%)			5.82	0.49	1.60	4.88	5.16	2.57	6.39	7.82	3.90	4.19	3.53	3.37 J	12.37
Metals (mg/kg dw)															
Arsenic	57	93	13	10 U	8	51	20	7 U	12	30	55	10	21	7 U	10 U
Copper	390	390	429 J	78 J	35 J	17 J	118	32	82	129	161	92	205	38	108
Lead	450	530	110 J	34 J	11 J	50 J	89	23	107	82	436	122	130	95	80
Mercury	0.41	0.59	0.12	0.02 U	0.03 U	0.10 U	0.17	0.05	0.22	0.18	0.32	0.10	0.12	0.03	0.31
Zinc	410	960	608 J	596 J	58 J	1,190 J	794	141	409	566	711	318	1,030 J	155	462
Total petroleum hydrocarbons (mg/kg dw)															
TPH-diesel	2,000 ^b	2,000 ^b	240	59 U	100 U	250 U	350	46	660	260	500	1,200	650	260	58 U
TPH-oil	2,000 ^b	2,000 ^b	1,400	220	200 U	500 U	2,700	260	2,500	1,500	2,200	3,800	2,000	1,200	280
LPAH (ug/kg dw)															
Acenaphthene	500	500	390	86	47	20 U	460 J	59 U	230 U	100 U	69 J	180	27	140 U	20 U
Acenaphthylene	1,300	1,300	150 U	62 U	20 U	20 U	460 U	59 U	230 U	100 U	110 U	130	14 J	140 U	20 U
Anthracene	960	960	1,200	320	130	20 U	760	66	230 U	140	200	480	160	140 U	12 J
Fluorene	540	540	470	120	56	20 U	390 J	59 U	230 U	64 J	110 U	130	25	140 U	20 U
Naphthalene	2,100	2,100	150 U	62 U	14 J	20 U	460 U	59 U	230 U	100 U	110 U	260	51	140 U	19 J
Phenanthrene	1,500	1,500	7,500	2,200	1,100	36	6,700	470	410	560	320	1,600	170	270	68
Total LPAH	5,200	5,200	9,560	2,726	1,347 J	36	8,310 J	536	410	764 J	589 J	2,780	447 J	270	99 J
HPAH (ug/kg dw)															
Benzo(a)anthracene	1,300	1,600	6,500	1,700	700	21	5,000	470	300	280	150	1,900	99	210	31
Benzo(a)pyrene	1,600	1,600	7,200	1,500	780	36	7,400	760	600	600	540	1,900	68	290	60
Total benzofluoranthenes	3,200	3,600	2,700	660	620	33	6,400	730	1,100	470	410	1,500	76	390	77
Benzo(g,h,i)perylene	670	720	16,000	3,300	1,800	110	28,000	2,800	1,400	2,300	1,300	2,900	280	790	130
Chrysene	1,400	2,800	8,800	1,900	1,000	46	12,000	1,100	670	1,300	790	2,100	290	430	84
Dibenz(a,h)anthracene	230	230	220	58 J	41	20 U	2,100	59 U	230 U	100 U	110 U	450	19 U	140 U	20 U
Fluoranthene	1,700	2,500	24,000	4,700	1,900	94	12,000	1,200	1,000	1,400	1,100	4,100	350	480	140
Indeno(1,2,3-c,d)pyrene	600	690	2,900	740	590	34	6,100	690	750	450	310	1,200	40 J	290	32
Pyrene	2,600	3,300	15,000	2,900	1,300	61	9,600	950	830	1,000	810	4,600	450 J	370	99
Total HPAH	12,000	17,000	83,320	17,458 J	8,731	435	88,600	8,700	6,650	7,800	5,410	20,650	1,653 J	3,250	653
Phthalates (ug/kg dw)															
Bis(2-ethylhexyl)phthalate	1,300	1,900	3,800 B	160 U	300 U	76 U	12,000 B	1,300 B	1,100 B	5,500 B	2,000 B	4,100 B	3,900	1,400 B	400
Butylbenzylphthalate	63	900	150 J	62 U	11 J	20 U	550	100	470	160	110 U	57 U	260 J	140 U	20 U
Diethylphthalate	200	1,200	150 U	62 U	20 U	20 U	460 U	59 U	230 U	100 U	110 U	57 U	19 U	140 U	20 U
Dimethylphthalate	71	160	150 U	62 U	20 U	20 U	460 U	59 U	230 U	100 U	110 U	57 U	19 U	140 U	20 U
Di-n-butylphthalate	1,400	1,400	150 U	62 U	20 U	20 U	460 U	59 U	230 U	100 U	420	57 U	440	140 U	50
Di-n-octylphthalate	6,200	NA	150 U	62 U	20 U	20 U	460 U	59 U	230 U	100 U	110 U	57 U	3,500	140 U	20 U
PCBs (ug/kg dw)															
Aroclor 1016			20 U	19 U	18 U	20 U	47 U	20 U	19 U	19 U	20 U	20 U	20 U	20 U	20 U
Aroclor 1221			20 U	19 U	18 U	20 U	47 U	20 U	19 U	19 U	20 U	20 U	20 U	20 U	20 U
Aroclor 1232			20 U	19 U	18 U	20 U	47 U	20 U	19 U	19 U	20 U	20 U	20 U	20 U	39 Y
Aroclor 1242			20 U	19 U	18 U	20 U	47 U	240	19 U	19 U	20 U	20 U	20 U	20 U	20 U
Aroclor 1248			30 Y	19 U	18 U	20 U	90	20 U	110	51	83	39	94	7 U	20 U
Aroclor 1254			55	19 U	18 U	20 U	120	77	120	71	120	76	100	20 U	20 U
Aroclor 1260			57	19 U	18	20 U	97	74	130	65	200	44	110 J	20 U	

Table 2: Ecology interagency agreement (2010-2011): SPU source tracing sample results (dry weight).

Sample ID	SQS/ LAET	CSL/ 2LAET	KCIA1-ST1	KCIA1-ST1	KCIA2-ST1	KCIA2-ST1	ID-ST1	ID-ST2	ID-ST2	KN-ST1	KN-ST1	MH7	MH241	MH242	MH243
Outfall			KCIA SD#1	KCIA SD#1	KCIA SD#2/PS45 EOF	KCIA SD#2/PS45 EOF	SW Idaho St SD	SW Idaho St SD	SW Idaho St SD	SW Kenny St SD/T115 CSO	SW Kenny St SD/T115 CSO	Norfolk CSO/SD/P S17 EOF	2nd Ave S SD	SW Idaho St SD	Diagonal Ave S CSO/SD
Sample type			Trap SD RZ17	Inline SD RZ17	Trap SD RZ17	Inline SD RZ17	Trap SD RX79, RZ07	Trap SD RX79, RZ07	Trap SD RX79, RZ07	Trap SD RX79, RZ07	Trap SD RX79, RZ07	Trap SD RX79, RZ07	Inline SD SV75, SW05	Inline SD SR72	Inline SD SH27
Conveyance type^c															
Lab reference															
Date			12/03/10	12/03/10	12/03/10	12/03/10	11/18/10	11/18/10	11/18/10	11/18/10	11/18/10	04/29/11	04/13/11	02/02/11	02/16/11
2,4,5-Trichlorophenol			760 U	310 U	98 U	99 U	2,300 U	290 U	1,200 U	530 U	570 U	290 U	96 U	680 U	99 U
2,4,6-Trichlorophenol			760 U	310 U	98 U	99 U	2,300 U	290 U	1,200 U	530 U	570 U	290 U	96 U	680 U	99 U
2,4-Dichlorophenol			760 U	310 U	98 U	99 U	2,300 U	290 U	1,200 U	530 U	570 U	290 U	96 U	680 U	99 U
2,4-Dimethylphenol ^a	29	29	150 U	62 U	20 U	20 U	460 U	59 U	230 U	100 U	110 U	57 U	14 J	140 U	20 U
2,4-Dinitrophenol			1,500 U	620 U	200 U	200 U	4,600 U	590 U	2,300 U	1,000 U	1,100 U	610 U	210 U	1,400 U	200 U
2,4-Dinitrotoluene			760 U	310 U	98 U	99 U	2,300 U	290 U	1,200 U	530 U	570 U	290 U	96 U	680 U	99 U
2,6-Dinitrotoluene			760 U	310 U	98 U	99 U	2,300 U	290 U	1,200 U	530 U	570 U	290 U	96 U	680 U	99 U
2-Choronaphthalene			150 U	62 U	20 U	20 U	460 U	59 U	230 U	100 U	110 U	57 U	19 U	140 U	20 U
2-Chlorophenol			150 U	62 U	20 U	20 U	460 U	59 U	230 U	100 U	110 U	57 U	19 U	140 U	20 U
2-Methylnaphthalene			150 U	62 U	10 J	20 U	460 U	59 U	230 U	100 U	110 U	340	43	140 U	14 J
2-Methylphenol ^a	63	63	150 U	62 U	20 U	20 U	460 U	59 U	230 U	100 U	110 U	57 U	43	140 U	12 J
2-Nitroaniline			760 U	310 U	98 U	99 U	2,300 U	290 U	1,200 U	530 U	570 U	290 U	96 U	680 U	99 U
2-Nitrophenol			150 U	62 U	20 U	20 U	460 U	59 U	230 U	100 U	110 U	290 U	96 U	140 U	20 U
3,3'-Dichlorobenzidine			760 U	310 U	98 U	99 U	2,300 U	290 U	1,200 U	530 U	570 U	290 U	96 U	680 U	99 U
3-Nitroaniline			760 U	310 U	98 U	99 U	2,300 U	290 U	1,200 U	530 U	570 U	290 U	96 U	680 U	99 U
4,6-Dinitro-2-methylphenol			1,500 U	620 U	200 U	200 U	4,600 U	590 U	2,300 U	1,000 U	1,100 U	570 U	190 U	1,400 U	200 U
4-Bromophenyl-phenylether			150 U	62 U	20 U	20 U	460 U	59 U	230 U	100 U	110 U	57 U	19 U	140 U	20 U
4-Chloro-3-methylphenol			760 U	310 U	98 U	99 U	2,300 U	290 U	1,200 U	530 U	570 U	290 U	96 U	680 U	99 U
4-Chloroaniline			760 U	310 U	98 U	99 U	2,300 U	290 U	1,200 U	530 U	570 U	290 U	96 U	680 U	99 U
4-Chlorophenyl-phenylether			150 U	62 U	20 U	20 U	460 U	59 U	230 U	100 U	110 U	57 U	19 U	140 U	20 U
4-Methylphenol ^a	670	670	150 U	62 U	20 U	20 U	280 J	59 U	230 U	130	110 U	120	580	200	27
4-Nitroaniline			760 U	310 U	98 U	99 U	2,300 UJ	290 UJ	1,200 UJ	530 UJ	570 UJ	290 U	96 U	680 U	99 U
4-Nitrophenol			760 U	310 U	98 U	99 U	2,300 U	290 U	1,200 U	530 U	570 U	290 U	96 U	680 U	99 U
Benzoic acid ^a	650	650	1,500 U	620 U	65 J	200 U	4,600 U	590 U	2,300 U	1,000 U	1,100 U	380 J	340	1,400 U	78 J
Benzyl alcohol ^a	57	73	760 UJ	310 UJ	98 UJ	99 UJ	460 U	59 U	230 U	100 U	110 U	210	100	680 U	48 J
bis(2-Chloroethoxy) methane			150 U	62 U	20 U	20 U	460 U	59 U	230 U	100 U	110 U	57 U	19 U	140 U	20 U
Bis-(2-chloroethyl) ether			150 U	62 U	20 U	20 U	460 U	59 U	230 U	100 U	110 U	57 U	19 U	140 U	20 U
Carbazole			1,900	440	260	10 J	1,100	77	230 U	96 J	66 J	120	56	140 U	16 J
Dibenzofuran	540	540	340	76	40	20 U	300 J	59 U	230 U	100 U	110 U	60	29	140 U	20 U
Hexachlorobenzene	22	70	150 U	62 U	20 U	20 U	460 U	59 U	230 U	100 U	110 U	57 U	19 U	140 U	20 U
Hexachlorobutadiene	11	120	150 U	62 U	20 U	20 U	460 U	59 U	230 U	100 U	110 U	57 U	19 U	140 U	20 U
Hexachlorocyclopentadiene			760 U	310 U	98 U	99 U	2,300 U	290 U	1,200 U	530 U	570 U	290 U	96 U	680 U	99 U
Hexachloroethane			150 U	62 U	20 U	20 U	460 U	59 U	230 U	100 U	110 U	57 U	19 U	140 U	20 U
Isophorone			150 U	62 U	20 U	20 U	460 U	59 U	230 U	100 U	110 U	57 U	52	140 U	20 U
Nitrobenzene			150 U	62 U	20 U	20 U	460 U	59 U	230 U	100 U	110 U	57 U	19 U	140 U	20 U
N-Nitroso-di-n-propylamine			150 U	62 U	20 U	20 U	460 U	59 U	230 U	100 U	110 U	57 U	19 U	140 U	20 U
N-Nitrosodiphenylamine	28	40	150 U	62 U	20 U	20 U	460 U	59 U	230 U	100 U	86 J	57 U	18 J	140 U	20 U
Pentachlorophenol ^a	360	690	760 U	310 U	98 U	99 U	2,300 U	290 U	1,200 U	530 U	230 J	290 U	34 J	680 U	99 U
Phenol ^a	420	1,200	150 U	62 U	20 U	20 U	460 U	59 U	230 U	100 U	110 U	100	590	140 U	42

a. Sediment management standards based on dry weight concentration.

b. Sediment quality standard/lowest apparent effects threshold

c. Cleanup screening level/second lowest apparent effects threshold

d. MTCA Method A soil cleanup level

Bold = Compound detected in sample.

J = Value is an estimate

U = Target analyte not detected at the reported concentration

R = Analytical result is rejected and cannot be used.

Y = Analyte is not detected at or above the reported concentration. The reporting limit is raised due to chromatographic interference. Y flag is equivalent to U flag with a raised reporting limit.

RCB = Right-of-way catch basin

CB = Onsite catch basin

CSS = Combined sewer system

Inline = Inline grab sample

Dirt = Street dirt sample

Exceeds SQS/LAET/MTCA Method A

Exceeds CSL/2LAET

Table 2: Ecology interagency agreement (2010-2011): SPU source tracing sample results (dry weight).

Sample ID	SQS/ LAET	CSL/ 2LAET	MH244	RCB262	RCB37	RCB154	RCB225	RCB226	RCB227	RCB228	RCB229	RCB230	RCB231	RCB232	RCB233	
Outfall			S 96th St SD	1st Ave S SD (west)	Diagonal Ave S CSO/SD	S 96th St SD	S Myrtle St SD	S Myrtle St SD	7th Ave S SD	7th Ave S SD	CS	SW Idaho St SD	Norfolk CSO/SD/PS 17 EOF	West Seattle study area	West Seattle study area	
Sample type			Inline SD	Inline SD	RCB SD	RCB SD	RCB SD	RCB SD	RCB SD	RCB SD	RCB	RCB SD	RCB	RCB SD	RCB	
Conveyance type ^c			SR72	ST44	SH27	SR72	SH27	SH27	SM94	SM94	SM94	SM94	SM94	SO68, E1100318	SO68, E1100318	
Lab reference																
Date	04/13/11	04/22/11	02/02/11	04/13/11	02/02/11	02/02/11	03/11/11	03/11/11	03/11/11	03/11/11	03/11/11	03/11/11	03/11/11	03/24/11	03/24/11	
Total solids (%)	75.7	60.0		70.5	36.1	82.3	44.4	70.1	72.8	84.9	64.2	57.2	40.8			
TOC (%)	0.91	8.28		2.55	6.43	4.82	10.40	1.82	2.80	1.22	5.21	6.22 J		14.50		
Metals (mg/kg dw)																
Arsenic	57	93	11	13	7 U	18	20	6	10	7	30 U	30 U	14	8 U	10 U	
Copper	390	390	39	97 J	376	65.4	860	193	406	82	641	194	44	31	60	
Lead	450	530	25	53 J	56	29	724	256	363	45	280	20	47	29	121	
Mercury	0.41	0.59	0.03 U	0.25	0.03	0.10	1.53	0.24	0.56	0.04	3.80	0.02 U	0.09	0.04 U	0.08	
Zinc	410	960	166 J	519 J	208	468	4,170	763	823	217	1,640	323	122	148	301	
Total petroleum hydrocarbons (mg/kg dw)																
TPH-diesel	2,000 ^b	2,000 ^b	64 U	2,900		110	7,200	620	2,600	64 U	1,500	58 U	72 U	82 U	93 U	
TPH-oil	2,000 ^b	2,000 ^b	160	16,000		810	20,000	2,700	11,000	280	5,900	410	140 U	280	370	
LPAH (ug/kg dw)																
Acenaphthene	500	500	19 U	480 U		24	970 U	210 U	190 U	21 U	88 U	20 U	20 U	39 U	58 U	
Acenaphthylene	1,300	1,300	19 U	480 U		19 U	970 U	210 U	190 U	21 U	88 U	20 U	20 U	39 U	58 U	
Anthracene	960	960	19 U	480 U		19 U	970 U	210 U	350 J	73 J	88 U	25 J	20 U	39 U	58 U	
Fluorene	540	540	19 U	480 U		34	970 U	210 U	160 J	18 J	88 U	11 J	20 U	39 U	58 U	
Naphthalene	2,100	2,100	19 U	480 U		25	840 J	210 U	110 J	12 J	540	17 J	20 U	39 U	58 U	
Phenanthrene	1,500	1,500	61	580		400	2,200	220	680	140	510	120	20 U	32 J	180	
Total LPAH	5,200	5,200	61	580		483	3,040 J	220	1,300 J	243 J	1,050	173 J	20	32 J	180	
HPAH (ug/kg dw)																
Benzo(a)anthracene	1,300	1,600	32	480 U		250	570 J	230	490	56	450	69	20 U	23 J	87	
Benzo(a)pyrene	1,600	1,600	40	480 U		330	780 J	260	1,200	44	430	89	20 U	25 J	110	
Total benzofluoranthenes	3,200	3,600	44	290 J		170	890 J	200 J	550	36	460	59	20 U	39 U	60	
Benzo(g,h,i)perylene	670	720	95	510		680	1,700	510	1,400 J	120 J	1,900 J	160 J	11 J	52 J	220 J	
Chrysene	1,400	2,800	59	510		480	1,800	410	1,400 J	120 J	1,000 J	130 J	20 U	40 J	160 J	
Dibenz(a,h)anthracene	230	230	19 U	480 U		52 J	970 U	210 U	190 U	21 U	88 U	20 U	20 U	39 U	58 U	
Fluoranthene	1,700	2,500	90	680		790	2,800	540	1,600	280	1,300	270	10 J	81	340	
Indeno(1,2,3-c,d)pyrene	600	690	31 J	480 U		140 J	500 J	160 J	290	27	370	45	20 U	39 U	58 U	
Pyrene	2,600	3,300	92 J	890		670 J	2,800	510	1,700 J	160 J	1,100 J	160 J	20 U	52 J	230 J	
Total HPAH	12,000	17,000	483 J	2,880 J		3,562 J	11,840 J	2,820 J	8,630 J	843 J	7,010 J	982 J	21 J	273 J	1,207 J	
Phthalates (ug/kg dw)																
Bis(2-ethylhexyl)phthalate	1,300	1,900	330	25,000 B		2,400	61,000 B	5,700 B	1,400,000	740	14,000	430	11 J	350	1,100	
Butylbenzylphthalate	63	900	44 J	480 U		3,000	5,900	1,500	1,400 J	160 J	4,400 J	330 J	20 UJ	39 U	58 U	
Diethylphthalate	200	1,200	19 U	480 U		19 U	970 U	210 U	190 U	21 U	88 U	20 U	20 U	39 U	58 U	
Dimethylphthalate	71	160	19 U	480 U		37	1,400	370	170 J	14 J	280	20 U	20 U	39 U	58 U	
Di-n-butylphthalate	1,400	1,400	23	480 U		69	1,600	230	190 U	54 J	88 U	91 J	20 U	39 U	58 U	
Di-n-octylphthalate	6,200	NA	19 U	480 U		350	970 U	210 U	190 U	21 U	88 U	20 U	20 U	39 U	58 U	
PCBs (ug/kg dw)																
Aroclor 1016			20 U	19 U	20 U	20 U	330 U	20 U	20 U	19 U	19 U	19 U	20 U	20 U	20 U	
Aroclor 1221			20 U	19 U	20 U	20 U	330 U	20 U	20 U	19 U	19 U	19 U	20 U	20 U	20 U	
Aroclor 1232			20 U	19 U	20 U	20 U	330 U	20 U	20 U	19 U	19 U	19 U	20 U	20 U	20 U	
Aroclor 1242			20 U	19 U	20 U	20 U	5,100	20 U	20 U	19 U	19 U	19 U	20 U	20 U	20 U	
Aroclor 1248			20 U	29 Y	59 Y	24 Y	330 U	360	220	29 Y	340	19 U	20 U	20 U	20 U	
Aroclor 1254			20 U	72 J	150	24	2,300	380	180	74	210	20	20 U	20 U	20 U	
Aroclor 1260			20 U	34 J	110	20 U	830 J	120	140 J	28 J	160 J	19 U	25 J	20 U	20 U	
Total PCBs	130	1,000	20 U	106 J	260	24	8,230 J	860	540 J	102 J	710 J	20	25 J	20 U	20 U	
Other organic compounds (ug/kg dw)																
1,2,4-Trichlorobenzene				19 U	480 U		19 U	970 U	210 U	190 U	21 U	88 U	20 U	20 U	39 U	58 U
1,2-Dichlorobenzene				19 U	480 U		19 U	970 U	210 U	190 U	21 U	88 U	20 U	20 U	39 U	58 U
1,3-Dichlorobenzene				19 U	480 U		19 U	970 U	210 U	190 U</td						

Table 2: Ecology interagency agreement (2010-2011): SPU source tracing sample results (dry weight).

Sample ID	SQS/ LAET	CSL/ 2LAET	MH244	RCB262	RCB37	RCB154	RCB225	RCB226	RCB227	RCB228	RCB229	RCB230	RCB231	RCB232	RCB233
Outfall			S 96th St SD	1st Ave S SD (west)	Diagonal Ave S CSO/SD	S 96th St SD	S Myrtle St SD	S Myrtle St SD	7th Ave S SD	7th Ave S SD	CS	SW Idaho St SD	Norfolk CSO/SD/PS 17 EOF	West Seattle study area	West Seattle study area
Sample type			Inline	Inline	RCB	RCB	RCB	RCB	RCB	RCB	RCB	RCB	RCB	RCB	RCB
Conveyance type ^c			SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
Lab reference			SR72	ST44	SH27	SR72	SH27	SH27	SM94	SM94	SM94	SM94	SM94	SO68, E1100318	SO68, E1100318
Date			04/13/11	04/22/11	02/02/11	04/13/11	02/02/11	02/02/11	03/11/11	03/11/11	03/11/11	03/11/11	03/11/11	03/24/11	03/24/11
2,4,5-Trichlorophenol			96 U	2,400 U		94 U	4,800 U	1,100 U	950 U	110 U	440 U	99 U	98 U	200 U	290 U
2,4,6-Trichlorophenol			96 U	2,400 U		94 U	4,800 U	1,100 U	950 U	110 U	440 U	99 U	98 U	200 U	290 U
2,4-Dichlorophenol			96 U	2,400 U		94 U	4,800 U	1,100 U	950 U	110 U	440 U	99 U	98 U	200 U	290 U
2,4-Dimethylphenol ^a	29	29	19 UJ	480 U		19 U	970 U	210 U	190 U	21 U	88 U	20 U	20 U	39 U	58 U
2,4-Dinitrophenol			210 UJ	5,100 U		200 U	9,700 U	2,100 U	1,900 U	210 U	880 U	200 U	200 U	390 U	580 U
2,4-Dinitrotoluene			96 U	2,400 U		94 U	4,800 U	1,100 U	950 U	110 U	440 U	99 U	98 U	200 U	290 U
2,6-Dinitrotoluene			96 U	2,400 U		94 U	4,800 U	1,100 U	950 U	110 U	440 U	99 U	98 U	200 U	290 U
2-Choronaphthalene			19 U	480 U		19 U	970 U	210 U	190 U	21 U	88 U	20 U	20 U	39 U	58 U
2-Chlorophenol			19 U	480 U		19 U	970 U	210 U	190 U	21 U	88 U	20 U	20 U	39 U	58 U
2-Methylnaphthalene			19 U	240 J		26	2,000	120 J	210	14 J	740	10 J	20 U	39 U	58 U
2-Methylphenol ^a	63	63	19 U	480 U		19 U	970 U	210 U	190 U	21 U	88 U	20 U	20 U	39 U	58 U
2-Nitroaniline			96 U	2,400 U		94 U	4,800 U	1,100 U	950 U	110 U	440 U	99 U	98 U	200 U	290 U
2-Nitrophenol			96 U	2,400 U		94 U	970 U	210 U	190 U	21 U	88 U	20 U	20 U	39 U	58 U
3,3'-Dichlorobenzidine			96 UJ	2,400 U		94 U	4,800 U	1,100 U	950 U	110 U	440 U	99 U	98 U	200 U	290 U
3-Nitroaniline			96 U	2,400 U		94 U	4,800 U	1,100 U	950 U	110 U	440 U	99 U	98 U	200 UU	290 UU
4,6-Dinitro-2-methylphenol			190 U	4,800 U		190 U	9,700 U	2,100 U	1,900 U	210 U	880 U	200 U	200 U	390 U	580 U
4-Bromophenyl-phenylether			19 U	480 U		19 U	970 U	210 U	190 U	21 U	88 U	20 U	20 U	39 U	58 U
4-Chloro-3-methylphenol			96 U	2,400 U		94 U	4,800 U	1,100 U	950 U	110 U	440 U	99 U	98 U	200 U	290 U
4-Chloroaniline			96 UJ	2,400 U		94 U	4,800 U	1,100 U	950 U	110 U	440 U	99 U	98 U	200 U	290 U
4-Chlorophenyl-phenylether			19 U	480 U		19 U	970 U	210 U	190 U	21 U	88 U	20 U	20 U	39 U	58 U
4-Methylphenol ^a	670	670	19 U	290 J		38	5,000	1,700	1,400	480	68 J	11 J	20 U	210	740
4-Nitroaniline			96 U	2,400 U		94 U	4,800 U	1,100 U	950 UJ	110 UJ	440 UJ	99 UJ	98 UJ	200 U	290 U
4-Nitrophenol			96 U	2,400 U		94 U	4,800 U	1,100 U	950 U	110 U	440 U	99 U	98 U	200 U	290 U
Benzoic acid ^a	650	650	54 J	4,800 U		180 J	6,500 J	510 J	1,900 U	180 J	360 J	48 J	110 J	180 J	330 J
Benzyl alcohol ^a	57	73	19 U	480 U		44	4,800 U	1,100 U	950 U	850	200 J	16 J	460	200 U	44 J
bis(2-Chloroethoxy) methane			19 U	480 U		19 U	970 U	210 U	190 U	21 U	88 U	20 U	20 U	39 U	58 U
Bis-(2-chloroethyl) ether			19 U	480 U		19 U	970 U	210 U	190 U	21 U	88 U	20 U	20 U	39 U	58 U
Carbazole			19 U	480 U		54	970 U	210 U	190 U	31	87 J	18 J	20 U	39 U	32 J
Dibenzofuran	540	540	19 U	480 U		22	970 U	210 U	190 U	21 U	88 U	20 U	20 U	39 U	58 U
Hexachlorobenzene	22	70	19 U	480 U		19 U	970 U	210 U	190 U	18 J	88 U	20 U	20 U	39 U	58 U
Hexachlorobutadiene	11	120	19 U	480 U		19 U	970 U	210 U	190 U	21 U	88 U	20 U	20 U	39 U	58 U
Hexachlorocyclopentadiene			96 UJ	2,400 U		94 U	4,800 U	1,100 U	950 U	110 U	440 U	99 U	98 U	200 U	290 U
Hexachloroethane			19 U	480 U		19 U	970 U	210 U	190 U	21 U	88 U	20 U	20 U	39 U	58 U
Isophorone			19 U	480 U		19 U	970 U	210 U	190 U	21 U	88 U	20 U	20 U	39 U	58 U
Nitrobenzene			19 U	480 U		19 U	970 U	210 U	190 U	21 U	88 U	20 U	20 U	39 U	58 U
N-Nitroso-di-n-propylamine			19 U	480 U		19 U	970 U	210 U	190 U	21 U	88 U	20 U	20 U	39 U	58 U
N-Nitrosodiphenylamine	28	40	19 U	480 U		16 J	970 U	210 U	190 U	21 U	88 U	20 U	20 U	39 U	58 U
Pentachlorophenol ^a	360	690	96 UJ	2,400 U		48 J	4,800 U	340 J	950 U	110 U	440 U	99 U	98 U	200 U	290 U
Phenol ^a	420	1,200	15 J	480 U		74	870 J	130 J	190 U	42	88 U	67	26	39 U	56 J

a. Sediment management standards based on dry weight concentration.

b. Sediment quality standard/lowest apparent effects threshold

c. Cleanup screening level/second lowest apparent effects threshold

d. MTCA Method A soil cleanup level

Bold = Compound detected in sample.

J Value is an estimate

U Target analyte not detected at the reported concentration

R Analytical result is rejected and cannot be used.

Y Analyte is not detected at or above the reported concentration. The reporting limit is raised due to chromatographic interference. Y flag is equivalent to U flag with a raised reporting limit.

RCB = Right-of-way catch basin

CB = Onsite catch basin

CSS = Combined sewer system

Inline = Inline grab sample

Dirt = Street dirt sample

Exceeds SQS/LAET/MTCA Method A

Exceeds CSL/2LAET

Table 2: Ecology interagency agreement (2010-2011): SPU source tracing sample results (dry weight).

Sample ID	SQS/ LAET	CSL/ 2LAET	RCB234	RCB235	RCB236	RCB237	RCB238	RCB239	RCB240	RCB241	RCB242	RCB243	RCB244	RCBC245	RCB246	RCB247
Outfall			West Seattle study area	West Seattle study area	West Seattle study area	Georgetown study area	Georgetown study area	South Park study area	South Park study area	Diagonal Ave S CSO/SD						
Sample type			RCB SD	RCB SD	RCB SD	RCB SD	RCB SD	RCB SD	RCB SD	RCB SD	RCB SD	RCB SD	RCB SD	RCB SD	RCB SD	RCB SD
Conveyance type^c			SO68, E1100318	SO68, E1100318	SO68, E1100318	SQ00, E1100342	SR10, E1100369	SR10, E1100369								
Lab reference																
Date	03/24/11	03/24/11	03/24/11	04/01/11	04/01/11	04/01/11	04/01/11	04/01/11	04/01/11	04/01/11	04/01/11	04/08/11	04/08/11	04/08/11	04/08/11	04/08/11
Total solids (%)	38.6	34.7	69.8	36.5	76.5	45.0	37.8	42.8	64.5	68.7	42.0	67.5	43.0	60.4		
TOC (%)	22.50	21.80	7.34	13.90	1.66	11.30	5.75	10.10	4.08	5.06	11.40	8.52	12.90	8.85		
Metals (mg/kg dw)																
Arsenic	57	93	10 U	9 U	16	10	6 U	10 U	10 U	13	7 U	10 U	7 U	10 U	8	
Copper	390	390	30	38	30	138	28	37	89	95.6	138	53	99	66	63	47
Lead	450	530	28	27	28	213	175	26	74	72	118	34	81	29	63	46
Mercury	0.41	0.59	0.05 U	0.04 U	0.16	0.19	0.03	0.04 U	0.10	0.05	0.15	0.03 U	0.08	0.03 U	0.10	0.04
Zinc	410	960	89	166	117	698	94	147	458	370	460	135	365	186	344	213
Total petroleum hydrocarbons (mg/kg dw)																
TPH-diesel	2,000 ^b	2,000 ^b	110 U	120 U	65 U	780	140	330	1,000	520	340	140	850	190	120 U	340
TPH-oil	2,000 ^b	2,000 ^b	570	500	400	4,900	1,200	1,700	6,300	3,400	2,300	1,000	5,900	1,000	680	3,100
LPAH (ug/kg dw)																
Acenaphthene	500	500	26 J	40 U	39 U	200 U	58 U	89 U	240 U	130 U	160	97 U	390 U	99 U	200 U	170
Acenaphthylene	1,300	1,300	40 U	40 U	39 U	200 U	58 U	89 U	240 U	130 U	57 J	97 U	390 U	99 U	200 U	170
Anthracene	960	960	150 J	40 U	39 U	170 J	58 U	89 U	240 U	210 J	390 J	97 U	390 U	99 U	200 U	170
Fluorene	540	540	39 J	40 U	39 U	140 J	58 U	89 U	240 U	130 U	250	97 U	390 U	99 U	200 U	170
Naphthalene	2,100	2,100	20 J	40 U	39 U	120 J	58 U	89 U	240 U	94 J	110 J	97 U	390 U	99 U	200 U	170
Phenanthrene	1,500	1,500	920	53	39 U	860	100	75 J	320	780	2,100	73 J	470	61 J	230	190
Total LPAH	5,200	5,200	1,155 J	53	39 U	1,290 J	100	75 J	320	1,084 J	3,067 J	73 J	470	61 J	230	190
HPAH (ug/kg dw)																
Benzo(a)anthracene	1,300	1,600	630	40 U	39 U	410	41 J	89 U	240 U	1,100	570	97 U	390 U	99 U	220	85
Benzo(a)pyrene	1,600	1,600	1,300	40 U	39 U	600	39 J	89 U	240 U	1,400	530	45 J	390	99 U	280	130
Total benzofluoranthenes	3,200	3,600	440	40 U	39 U	600	60	89 U	190 J	930	280	71 J	440	83 J	200	180
Benzo(g,h,i)perylene	670	720	2,600 J	40 U	39 U	1,300 J	92 J	78 J	220 J	2,900 J	1,300 J	92 J	490	72 J	440	230
Chrysene	1,400	2,800	1,700 J	34 J	36 J	1,000 J	97 J	76 J	240 J	2,000 J	1,400 J	130	620	91 J	310	240
Dibenz(a,h)anthracene	230	230	40 U	40 U	39 U	200 U	58 U	89 U	240 U	390	100	97 U	390 U	99 U	200 U	170
Fluoranthene	1,700	2,500	3,000	80	39 U	1,700	160	130	440	3,400	3,100	120	780	100	500	380
Indeno(1,2,3-c,d)pyrene	600	690	440	40 U	39 U	410	29 J	89 U	240 U	830	190	97 U	390 U	99 U	150 J	72
Pyrene	2,600	3,300	1,800 J	51 J	39 U	1,100 J	92 J	80 J	270 J	1,800 J	1,600 J	97 J	640	83 J	300	260
Total HPAH	12,000	17,000	11,910 J	165 J	36 J	7,120 J	610 J	364 J	1,360 J	14,750 J	9,070 J	555 J	3,360	429 J	2,400 J	1,577
Phthalates (ug/kg dw)																
Bis(2-ethylhexyl)phthalate	1,300	1,900	810	570	290	6,200	1,700	1,200	4,900	7,000	3,800	870	16,000	2,100	2,300	3,000
Butylbenzylphthalate	63	900	40 U	40 U	39 U	200 U	58 U	180 J	190 J	290 J	310 J	97 U	390 U	260	200 U	170
Diethylphthalate	200	1,200	40 U	40 U	39 U	200 U	58 U	89 U	240 U	130 U	71 U	97 U	390 U	99 U	200 U	170
Dimethylphthalate	71	160	40 U	40 U	39 U	200 U	58 U	89 U	240 U	130 U	71 U	97 U	390 U	99 U	200 U	170
Di-n-butylphthalate	1,400	1,400	40 U	40 U	39 U	200 U	58 U	89 U	240 U	130 U	380 J	97 U	390 U	99 U	200 U	170
Di-n-octylphthalate	6,200	NA	40 U	40 U	39 U	200 U	58 U	89 U	240 U	130 U	71 U	97 U	390 U	99 U	200 U	170
PCBs (ug/kg dw)																
Aroclor 1016			20 U	20 U	19 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20
Aroclor 1221			20 U	20 U	19 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20
Aroclor 1232			20 U	20 U	19 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20
Aroclor 1242			20 U	20 U	19 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20
Aroclor 1248			20 U	20 U	19 U	60	20 U	20 U	20 U	27	81	20 U	20 U	20 U	20 U	20
Aroclor 1254			20 U	20 U	19 U	85	20 U	20 U	20 U	50	120	20 U	20 U	28	20 U	20
Aroclor 1260			20 U	20 U	19 U	49	20 U	20 U	20 U	36	91	20 U				

Table 2: Ecology interagency agreement (2010-2011): SPU source tracing sample results (dry weight).

Sample ID	SQS/ LAET	CSL/ 2LAET	RCB234	RCB235	RCB236	RCB237	RCB238	RCB239	RCB240	RCB241	RCB242	RCB243	RCB244	RCBC245	RCB246	RCB247
Outfall			West Seattle study area	West Seattle study area	West Seattle study area	Georgetown study area	Georgetown study area	South Park study area	South Park study area	Diagonal Ave S CSO/SD						
Sample type			RCB SD	RCB SD	RCB SD	RCB SD	RCB SD	RCB SD	RCB SD	RCB SD	RCB SD	RCB SD	RCB SD	RCB SD	RCB SD	RCB SD
Conveyance type^c			SO68, E1100318	SO68, E1100318	SO68, E1100318	SQ00, E1100342	SR10, E1100369	SR10, E1100369	SR10, E1100369							
Lab reference																
Date			03/24/11	03/24/11	03/24/11	04/01/11	04/01/11	04/01/11	04/01/11	04/01/11	04/01/11	04/01/11	04/01/11	04/08/11	04/08/11	04/08/11
2,4,5-Trichlorophenol			200 U	200 U	190 U	1,000 U	290 U	450 U	1,200 U	630 U	360 U	490 U	1,900 U	490 U	980 U	840
2,4,6-Trichlorophenol			200 U	200 U	190 U	1,000 U	290 U	450 U	1,200 U	630 U	360 U	490 U	1,900 U	490 U	980 U	840
2,4-Dichlorophenol			200 U	200 U	190 U	1,000 U	290 U	450 U	1,200 U	630 U	43 J	490 U	1,900 U	490 U	980 U	840
2,4-Dimethylphenol ^a	29	29	40 U	40 U	39 U	200 U	58 U	89 U	240 U	130 U	71 U	97 U	390 U	99 U	200 U	170
2,4-Dinitrophenol			400 U	400 U	390 U	2,000 U	580 U	890 U	2,400 U	1,300 U	710 U	970 U	3,900 U	990 U	2,000 U	1,700
2,4-Dinitrotoluene			200 U	200 U	190 U	1,000 U	290 U	450 U	1,200 U	630 U	360 U	490 U	1,900 U	490 U	980 U	840
2,6-Dinitrotoluene			200 U	200 U	190 U	1,000 U	290 U	450 U	1,200 U	630 U	360 U	490 U	1,900 U	490 U	980 U	840
2-Chloronaphthalene			40 U	40 U	39 U	200 U	58 U	89 U	240 U	130 U	71 U	97 U	390 U	99 U	200 U	170
2-Chlorophenol			40 U	40 U	39 U	200 U	58 U	89 U	240 U	130 U	71 U	97 U	390 U	99 U	200 U	170
2-Methylnaphthalene			40 U	40 U	39 U	400	58 U	89 U	240 U	65 J	93	97 U	390 U	80 J	200 U	170
2-Methylphenol ^a	63	63	40 U	40 U	39 U	200 U	58 U	89 U	240 U	130 U	71 U	97 U	390 U	99 U	200 U	170
2-Nitroaniline			200 U	200 U	190 U	1,000 U	290 U	450 U	1,200 U	630 U	360 U	490 U	1,900 U	490 U	980 U	840
2-Nitrophenol			40 U	40 U	39 U	200 U	58 U	89 U	240 U	130 U	71 U	97 U	390 U	99 U	200 U	170
3,3'-Dichlorobenzidine			200 U	200 U	190 U	1,000 U	290 U	450 U	1,200 U	630 U	360 U	490 U	1,900 U	490 U	980 U	840
3-Nitroaniline			200 U	200 UJ	190 UJ	1,000 U	290 U	450 U	1,200 U	630 U	360 U	490 U	1,900 U	490 U	980 U	840
4,6-Dinitro-2-methylphenol			400 U	400 U	390 U	2,000 U	580 U	890 U	2,400 U	1,300 U	710 U	970 U	3,900 U	990 U	2,000 U	1,700
4-Bromophenyl-phenylether			40 U	40 U	39 U	200 U	58 U	89 U	240 U	130 U	71 U	97 U	390 U	99 U	200 U	170
4-Chloro-3-methylphenol			200 U	200 U	190 U	1,000 U	290 U	450 U	1,200 U	630 U	360 U	490 U	1,900 U	490 U	980 U	840
4-Chloroaniline			200 U	200 U	190 U	1,000 U	290 U	450 U	1,200 U	630 U	360 U	490 UJ	1,900 U	490 UJ	980 UJ	840
4-Chlorophenyl-phenylether			40 U	40 U	39 U	200 U	58 U	89 U	240 U	130 U	71 U	97 U	390 U	99 U	200 U	170
4-Methylphenol ^a	670	670	2,200	3,900	270	2,200	58 U	2,700	210 J	1,200	150	1,100	2,000	740	1,200	6,000
4-Nitroaniline			200 U	200 U	190 U	1,000 U	290 U	450 U	1,200 U	630 U	360 U	490 U	1,900 U	490 U	980 U	840
4-Nitrophenol			200 U	200 U	190 U	1,000 U	290 U	450 U	1,200 U	630 U	360 U	490 U	1,900 U	490 U	980 U	840
Benzoic acid ^a	650	650	1,000	2,700	390	720 J	120 J	1,100	1,300 J	1,900	92 J	440 J	1,100 J	220 J	720 J	1,700
Benzyl alcohol ^a	57	73	200 U	98 J	190 U	1,000 U	7,600	89 J	1,200 U	120 J	43 J	490 U	1,900 U	490 U	980 U	130
bis(2-Chloroethoxy) methane			40 U	40 U	39 U	200 U	58 U	89 U	240 U	130 U	71 U	97 U	390 U	99 U	200 U	170
Bis-(2-chloroethyl) ether			40 U	40 U	39 U	200 U	58 U	89 U	240 U	130 U	71 U	97 U	390 U	99 U	200 U	170
Carbazole			260	40 U	39 U	200 U	58 U	89 U	240 U	310	210	97 U	390 U	99 U	200 U	170
Dibenzofuran	540	540	40 U	40 U	39 U	200 U	58 U	89 U	240 U	130 U	150	97 U	390 U	99 U	200 U	170
Hexachlorobenzene	22	70	40 U	40 U	39 U	200 U	58 U	89 U	240 U	130 U	71 U	97 U	390 U	99 U	200 U	170
Hexachlorobutadiene	11	120	40 U	40 U	39 U	200 U	58 U	89 U	240 U	130 U	71 U	97 U	390 U	99 U	200 U	170
Hexachlorocyclopentadiene			200 U	200 U	190 U	1,000 U	290 U	450 U	1,200 U	630 U	360 U	490 U	1,900 U	490 U	980 U	840
Hexachloroethane			40 U	40 U	39 U	200 U	58 U	89 U	240 U	130 U	71 U	97 U	390 U	99 U	200 U	170
Isophorone			40 U	40 U	39 U	200 U	58 U	89 U	240 U	130 U	71 U	97 U	390 U	99 U	200 U	170
Nitrobenzene			40 U	40 U	39 U	200 U	58 U	89 U	240 U	130 U	71 U	97 U	390 U	99 U	200 U	170
N-Nitroso-di-n-propylamine			40 U	40 U	39 U	200 U	58 U	89 U	240 U	130 U	71 U	97 U	390 U	99 U	200 U	170
N-Nitrosodiphenylamine	28	40	40 U	40 U	39 U	200 U	58 U	89 U	240 U	130 U	71 U	97 U	390 U	99 U	200 U	170
Pentachlorophenol ^a	360	690	200 U	200 U	190 U	100 J	290 U	450 U	1,200 U	630 U	82 J	58 J	1,900 U	490 U	340 J	840
Phenol ^a	420	1,200	260	760	43	200 U	570	190	140 J	200	110	150	390 U	99 U	200	140

a. Sediment management standards based on dry weight concentration.

b. Sediment quality standard/lowest apparent effects threshold

c. Cleanup screening level/second lowest apparent effects threshold

d. MTCA Method A soil cleanup level

Bold = Compound detected in sample.

J = Value is an estimate

U = Target analyte not detected at the reported concentration

R = Analytical result is rejected and cannot be used.

Table 2: Ecology interagency agreement (2010-2011): SPU source tracing sample results (dry weight).

Sample ID	SQS/ LAET	CSL/ 2LAET	RCB248	RCB249	RCB250	RCB251	RCB252	RCB253	RCB254	RCB255	RCB256	RCB257	RCB258	RCB259	RCB260	RCB261	
Outfall			Diagonal Ave S CSO/SD	SW Idaho St SD	Highland Park Wy SW SD	Highland Park Wy SW SD											
Sample type			RCB SD	RCB SD	RCB SD	RCB											
Conveyance type ^c			SR10, E1100369	SS85	SS85	SS85	SS85	SS85	ST44	ST44	ST44	ST44	ST44	ST44	ST44	ST44	
Lab reference																	
Date	04/08/11	04/20/11	04/20/11	04/20/11	04/20/11	04/20/11	04/22/11	04/22/11	04/22/11	04/22/11	04/22/11	04/22/11	04/22/11	04/22/11	04/22/11	04/22/11	
Total solids (%)	56.9	32.7	73.2	45.1	78.2	61.5	61.9	42.4	37.7	35.3	53.5	37.0	63.7	48.7			
TOC (%)	12.00	10.10	5.23	9.80	1.98	8.41	6.51	7.60	7.15	10.20	10.70	11.10	6.72	6.59			
Metals (mg/kg dw)																	
Arsenic	57	93 U	10 U	10 U	7 U	10 U	6 U	8 U	10	20	10 U	17	10 U	7 U	10 U		
Copper	390	390	2,670	48	57	70	13	30	70.1 J	70 J	77 J	72 J	74 J	84 J	29 J	32 J	
Lead	450	530	43	313	29	96	6	32	54 J	238 J	191 J	92 J	107 J	29 J	24 J	20 J	
Mercury	0.41	0.59	0.03 U	0.10	0.05	0.06	0.02 U	0.03 U	0.12	0.11	0.07	0.08	0.09	0.03	0.05		
Zinc	410	960	153	409	119	323	44	113	218 J	312 J	532 J	317 J	641 J	276 J	175 J	155 J	
Total petroleum hydrocarbons (mg/kg dw)																	
TPH-diesel	2,000 ^b	2,000 ^b	530	120 U	310	300	63 U	250	78 U	110 U	160	130 U	87 U	130 U	77	160	
TPH-oil	2,000 ^b	2,000 ^b	2,900	690	2,600	2,500	310	1,700	750	270	800	810	260	620	280	920	
LPAH (ug/kg dw)																	
Acenaphthene	500	500 U	160 U	120 U	53 U	32 J	18 U	56 U	94 U	58 U	33 J	58 U	56 U	58 U	54 U	57 U	
Acenaphthylene	1,300	1,300 U	160 U	120 U	53 U	58 U	18 U	56 U	94 U	58 U	56 U	58 U	56 U	58 U	54 U	57 U	
Anthracene	960	960 U	160 U	120 U	53 U	58 U	18 U	56 U	94 U	32 J	140	61	56 U	58 U	54 U	57 U	
Fluorene	540	540 U	160 U	120 U	53 U	58 U	18 U	56 U	94 U	32 J	92	38 J	56 U	58 U	54 U	57 U	
Naphthalene	2,100	2,100 U	380	58 J	53 U	75	18 U	56 U	94 U	170	89	49 J	39 J	35 J	54 U	40 J	
Phenanthrene	1,500	1,500	160 U	220 B	87 B	160 B	25 B	130 B	110	380	1,000	390	70	120	66	120	
Total LPAH	5,200	5,200	380	278 B	87 B	267 B	25 B	130 B	110	614 J	1,354 J	538 J	109 J	155 J	66	160 J	
HPAH (ug/kg dw)																	
Benzo(a)anthracene	1,300	1,600 J	160 U	93 J	53	49 J	15 J	62	57 J	170	580	260	45 J	58 U	54 U	37 J	
Benzo(a)pyrene	1,600	1,600 J	160 U	110 J	53	46 J	14 J	76	66 J	190	630	260	59	50 J	33 J	40 J	
Total benzofluoranthenes	3,200	3,600	92 J	130	110	130	18	110	150	120	380	170	76 J	38 J	33 J	37 J	
Benzo(g,h,i)perylene	670	720	93 J	220	100	110	31	170	180	500	1,500	750	170	130	82	150	
Chrysene	1,400	2,800	160 U	190	140	150	25	170	150	330	920	420	120	110	68	94	
Dibenz(a,h)anthracene	230	230 U	160 U	120 U	53 U	58 U	18 U	56 U	94 U	55 J	130	58	56 U	58 U	54 U	57 U	
Fluoranthene	1,700	2,500	130 J	240	130	160	34	180	170	530	1,800	660	120	130	84	110	
Indeno(1,2,3-c,d)pyrene	600	690 J	160 U	70 J	48 J	49 J	18 U	56 J	52 J	92	290	120	56 U	58 U	54 U	57 U	
Pyrene	2,600	3,300	120 J	280	190	220	36	190	200	470	1,600	600	130	160	110	130	
Total HPAH	12,000	17,000 J	435 J	1,333 J	824 J	914 J	173 J	1,014 J	1,025 J	2,457 J	7,830	3,298	720 J	618 J	410 J	598 J	
Phthalates (ug/kg dw)																	
Bis(2-ethylhexyl)phthalate	1,300	1,900	1,500	4,300	1,500	22,000	840	1,300	1,500	B	2,300	B	20,000	5,500	B	1,200	B
Butylbenzylphthalate	63	900 U	160 U	360 J	160 J	58 J	32 J	56 J	140	560	370	58 U	200	180	460	57 U	
Diethylphthalate	200	1,200 U	160 U	120 U	53 U	58 U	18 U	56 U	94 U	58 U	56 U	58 U	56 U	58 U	84	57 U	
Dimethylphthalate	71	160 U	160 U	120 U	53 U	32 J	18 U	62	94 U	100	56 U	58 U	56 U	58 U	100	57 U	
Di-n-butylphthalate	1,400	1,400 U	160 U	270	40 J	560	18 UJ	99	4,200	52 J	56 U	58 U	53 J	47 J	54 U	57 U	
Di-n-octylphthalate	6,200	NA U	160 U	120	98	170	39	79	94 U	58 U	56 U	58 U	56 U	58 U	54 U	57 U	
PCBs (ug/kg dw)																	
Aroclor 1016	U	20 U	19 U	18 U	19 U	20 U	19 U	20 U	19 U	20 U							
Aroclor 1221	U	20 U	19 U	18 U	19 U	20 U	19 U	20 U	19 U	20 U							
Aroclor 1232	U	20 U	19	18 U	19 U	20 U	19 U	20 U	19 U	20 U							
Aroclor 1242	U	20 U	19 U	18 U	19 U	20 U	19 U	20 U	19 U	20 U							
Aroclor 1248	U	27	19 U	18 U	19 U	20 U	19 U	20 U	19 U	20 U							
Aroclor 1254	U	29	37	18 U	19 U	20 U	19 U	20 U	29 J	22 J	98 J	65 J	58 J	20 UJ	19 UJ	20 UJ	
Aroclor 1260	U	20 U	19 U	18 U	9,200 J	20 U	19 U	20 U	20 UJ	38 J	20 UJ	23 J	20 UJ	19 UJ	20 UJ	20 UJ	
Total PCBs	130	1,															

Table 2: Ecology interagency agreement (2010-2011): SPU source tracing sample results (dry weight).

Sample ID	SQS/ LAET	CSL/ 2LAET	RCB248	RCB249	RCB250	RCB251	RCB252	RCB253	RCB254	RCB255	RCB256	RCB257	RCB258	RCB259	RCB260	RCB261		
Outfall			Diagonal Ave S CSO/SD	SW Idaho St SD	Highland Park Wy SW SD	Highland Park Wy SW SD												
Sample type			RCB SD	RCB SD	RCB SD	RCB												
Conveyance type^c			SR10, E1100369	SS85	SS85	SS85	SS85	SS85	ST44	ST44	ST44	ST44	ST44	ST44	ST44	ST44	ST44	
Lab reference																		
Date			04/08/11	04/20/11	04/20/11	04/20/11	04/20/11	04/20/11	04/22/11	04/22/11	04/22/11	04/22/11	04/22/11	04/22/11	04/22/11	04/22/11	04/22/11	
2,4,5-Trichlorophenol		U	820 U	580 U	260 U	290 U	91 U	280 U	470 U	290 U	280 U	290 U	280 U	290 U	270 U	270 U	280 U	
2,4,6-Trichlorophenol		U	820 U	580 U	260 U	290 U	91 U	280 U	470 U	290 U	280 U	290 U	280 U	290 U	270 U	270 U	280 U	
2,4-Dichlorophenol		U	820 U	580 U	260 U	290 U	91 U	280 U	470 U	290 U	280 U	290 U	280 U	290 U	270 U	270 U	280 U	
2,4-Dimethylphenol ^a	29	29 U	160 U	120 U	53 U	58 U	18 U	56 U	94 U	58 U	56 U	58 U	56 U	58 U	54 U	54 U	57 U	
2,4-Dinitrophenol		U	1,600 U	1,200 U	560 U	620 U	200 U	600 U	1,000 U	610 U	590 U	620 U	600 U	620 U	580 U	610 U	610 U	
2,4-Dinitrotoluene		U	820 U	580 U	260 U	290 U	91 U	280 U	470 U	290 U	280 U	290 U	280 U	290 U	270 U	270 U	280 U	
2,6-Dinitrotoluene		U	820 U	580 U	260 U	290 U	91 U	280 U	470 U	290 U	280 U	290 U	280 U	290 U	270 U	270 U	280 U	
2-Choronaphthalene		U	160 U	120 U	53 U	58 U	18 U	56 U	94 U	58 U	56 U	58 U	56 U	58 U	54 U	54 U	57 U	
2-Chlorophenol		U	160 U	120 U	53 U	58 U	18 U	56 U	94 U	58 U	56 U	58 U	56 U	58 U	54 U	54 U	57 U	
2-Methylnaphthalene		U	1,000	120 U	53 U	52 J	18 U	56 U	94 U	570	110	38 J	56 U	52 J	54 U	51 J	54 U	
2-Methylphenol ^a	63	63 U	160 U	120 U	53 U	58 U	18 U	34 J	94 U	58 U	56 U	58 U	56 U	58 U	54 U	54 U	57 U	
2-Nitroaniline		U	820 U	580 U	260 U	290 U	91 U	280 U	470 U	290 U	280 U	290 U	280 U	290 U	270 U	270 U	280 U	
2-Nitrophenol		U	160 U	580 U	260 U	290 U	91 U	280 U	470 U	290 U	280 U	290 U	280 U	290 U	270 U	270 U	280 U	
3,3'-Dichlorobenzidine		U	820 U	580 U	260 U	290 U	91 U	280 U	470 U	290 U	280 U	290 U	280 U	290 U	R	290 U	270 U	280 U
3-Nitroaniline		U	820 U	580 U	260 U	290 U	91 U	280 U	470 U	290 U	280 U	290 U	280 U	290 U	270 U	270 U	280 U	
4,6-Dinitro-2-methylphenol		U	1,600 U	1,200 U	530 U	580 U	180 U	560 U	940 U	580 U	560 U	580 U	560 U	580 U	540 U	540 U	570 U	
4-Bromophenyl-phenylether		U	160 U	120 U	53 U	58 U	18 U	56 U	94 U	58 U	56 U	58 U	56 U	58 U	54 U	54 U	57 U	
4-Chloro-3-methylphenol		U	820 U	580 U	260 U	290 U	91 U	280 U	470 U	290 U	280 U	290 U	280 U	290 U	270 U	270 U	280 U	
4-Chloroaniline		UJ	820 UJ	580 U	260 U	290 U	91 U	280 U	470 U	290 U	280 U	290 U	280 U	290 U	R	290 U	270 U	280 U
4-Chlorophenyl-phenylether		U	160 U	120 U	53 U	58 U	18 U	56 U	94 U	58 U	56 U	58 U	56 U	58 U	54 U	54 U	57 U	
4-Methylphenol ^a	670	670	2,600	6,800	1,000	1,300	150	1,800	620	270	4,600	760	59	1,000	210	5,300		
4-Nitroaniline		U	820 U	580 UJ	260 UJ	290 UJ	91 U	280 UJ	470 U	290 U	280 U	290 U	R	290 U	270 U	270 U	280 U	
4-Nitrophenol		U	820 U	580 U	260 U	290 U	91 U	280 U	470 U	290 U	280 U	290 U	280 U	290 U	270 U	270 U	280 U	
Benzoic acid ^a	650	650	510 J	4,600	250 J	1,300	180 U	550 J	180 J	920	1,600	910	1,100	1,300	150 J	580		
Benzyl alcohol ^a	57	73 J	820 U	410	53 U	120	18 U	48 J	94 U	58 U	260	58 U	260	700	54 U	57 U		
bis(2-Chloroethoxy) methane		U	160 U	120 U	53 U	58 U	18 U	56 U	94 U	58 U	56 U	58 U	56 U	58 U	54 U	54 U	57 U	
Bis-(2-chloroethyl) ether		U	160 U	120 U	53 U	58 U	18 U	56 U	94 U	58 U	56 U	58 U	56 U	58 U	54 U	54 U	57 U	
Carbazole		U	160 U	120 U	53 U	58 U	18 U	56 U	94 U	60	200	72	31 J	58 U	54 U	57 U		
Dibenzofuran	540	540 U	160 U	120 U	53 U	58 U	18 U	56 U	94 U	58 U	47 J	58 U	56 U	58 U	54 U	57 U		
Hexachlorobenzene	22	70 U	160 U	120 U	53 U	58 U	18 U	56 U	94 U	58 U	56 U	58 U	56 U	58 U	52 J	54 U	57 U	
Hexachlorobutadiene	11	120 U	160 U	120 U	53 U	58 U	18 U	56 U	94 U	58 U	56 U	58 U	56 U	58 U	54 U	54 U	57 U	
Hexachlorocyclopentadiene		U	820 U	580 U	260 U	290 U	91 U	280 U	470 U	290 U	280 U	290 U	280 U	290 U	0 R	290 U	270 U	280 U
Hexachloroethane		U	160 U	120 U	53 U	58 U	18 U	56 U	94 U	58 U	56 U	58 U	56 U	58 U	54 U	54 U	57 U	
Isophorone		U	160 U	120 U	53 U	58 U	18 U	56 U	94 U	58 U	56 U	58 U	56 U	58 U	54 U	54 U	57 U	
Nitrobenzene		U	160 U	120 U	53 U	58 U	18 U	56 U	94 U	58 U	56 U	58 U	56 U	58 U	54 U	54 U	57 U	
N-Nitroso-di-n-propylamine		U	160 U	120 U	53 U	58 U	18 U	56 U	94 U	58 U	56 U	58 U	56 U	58 U	54 U	54 U	57 U	
N-Nitrosodiphenylamine	28	40 U	160 U	120 U	53 U	58 U	18 U	56 U	94 U	58 U	30 J	58 U	56 U	58 U	54 U	54 U	57 U	
Pentachlorophenol ^a	360	690 U	820 U	580 UJ	260 UJ	290 UJ	91 UJ	280 UJ	470 U	290 U	150 J	150 J	150 J	280 U	290 U	270 U	280 U	
Phenol ^a	420	1,200 J	160 U	2,200	58	200	26	110	94	660	800	840	280	140	180	350		

a. Sediment management standards based on dry weight concentration.

b. Sediment quality standard/lowest apparent effects threshold

Table 2: Ecology interagency agreement (2010-2011): SPU source tracing sample results (dry weight).

Sample ID	SQS/ LAET	CSL/ 2LAET	RCB263	RCB264	RCB265	RCB266	RCB267	RCB268	RCB269	RCB270	RCB271	RCB272	RCB159-0	RCB159-3	RCB159-12	RCB273-0	
Outfall			7th Ave S SD	Norfolk CSO/SD/P S17 EOF	Norfolk CSO/SD/P S17 EOF	Norfolk CSO/SD/P S17 EOF	S 96th St SD	S 96th St SD	S 96th St SD	Hamm Creek	S 96th St SD	S 96th St SD	7th Ave S SD	7th Ave S SD	7th Ave S SD	7th Ave S SD	
Sample type			RCB SD	RCB SD	RCB SD	RCB SD	RCB SD	RCB SD	RCB SD	RCB SD	RCB SD	RCB SD	Soil	Soil	Soil	Soil	
Conveyance type ^c			SU75, SW05	SU75, SW05	SU75, SW05	SU75, SW05	SW81, E1100546	SW81, E1100546	SW81, E1100546	SW81, E1100546	SW84, E1100547	SX83	SX83	SX83	SX83	SX83	
Date			04/29/11	04/29/11	04/29/11	04/29/11	05/13/11	05/13/11	05/13/11	05/13/11	05/13/11	05/13/11	05/20/11	05/20/11	05/20/11	05/20/11	
Total solids (%)				72.1	68.1	62.8	52.8	77.7	81.1	80.9	73.9	55.3	80.3	59.0	62.3	74.4	66.2
TOC (%)				4.69	6.63	6.62	10.60	7.84	4.76	1.45	3.85	8.50	3.05	11.90	9.24	2.33	5.97
Metals (mg/kg dw)																	
Arsenic	57	93	10	7	9	9 U	7	7 U	6 U	7 U	9 U	6 U	474	950	260	198	
Copper	390	390	28	77	193	45	26	25	15	24	44	23	3,240	8,370	2,110	410	
Lead	450	530	15	108	45	22	38	17	3	34	125	24	176	105	20	50	
Mercury	0.41	0.59	0.02 U	0.03	0.03	0.05 U	0.03 U	0.03 U	0.03 U	0.02 U	0.07	0.03	0.27	0.26	0.13	0.19	
Zinc	410	960	116	235	383	180	388	93	70	65	151	98	825	1,660	594	468	
Total petroleum hydrocarbons (mg/kg dw)																	
TPH-diesel	2,000 ^b	2,000 ^b	160	950	950	250	120	47	28 U	170	94	53	220	230	63 U	67 U	
TPH-oil	2,000 ^b	2,000 ^b	760	3,700	5,900	1,100	720	220	71	810	520	300	1,500	1,900	420	340	
LPAH (ug/kg dw)																	
Acenaphthene	500	500	56 U	56 U	94	580	95 U	93 U	88 U	97 U	97 U	94 U	98 U	190 U	99 U	94 U	
Acenaphthylene	1,300	1,300	56 U	56 U	59 U	58 U	95 U	93 U	88 U	97 U	97 U	94 U	98 U	190 U	99 U	94 U	
Anthracene	960	960	56 U	56 U	180	2,200	95 U	93 U	88 U	97 U	97 U	94 U	98 U	190 U	99 U	94 U	
Fluorene	540	540	56 U	56 U	56	110	850	95 U	93 U	88 U	97 U	97 U	94 U	98 U	190 U	99 U	94 U
Naphthalene	2,100	2,100	56 U	70	94	81	95 U	93 U	88 U	97 U	97 U	94 U	98 U	190 U	99 U	94 U	
Phenanthrene	1,500	1,500	87	600	1,100	13,000	330	88 J	88 U	120	180	170	98	190 U	99 U	94 U	
Total LPAH	5,200	5,200	87	726	1,578	16,711	330	88 J	88 U	120	180	170	98	190 U	99 U	94 U	
HPAH (ug/kg dw)																	
Benzo(a)anthracene	1,300	1,600	56 U	190	400	5,300	330	56 J	88 U	68 J	120	140	59 J	190 U	99 U	94 U	
Benzo(a)pyrene	1,600	1,600	56 U	180	370	4,400	320	79 J	88 U	82 J	150	160	78 J	96 J	99 U	94 U	
Total benzofluoranthenes	3,200	3,600	50 J	230	460	2,800	290	88 J	88 U	110	130	160	140	210	99 U	80 J	
Benzo(g,h,i)perylene	670	720	92	490	920	7,900	710	180	66 J	170	300	360	250	370	74 J	99	
Chrysene	1,400	2,800	84	440	710	5,600	500	110	44 J	180	220	200	210	290	64 J	76 J	
Dibenz(a,h)anthracene	230	230	56 U	48 J	120	760	85 J	93 U	88 U	97 U	97 U	94 U	98 U	190 U	99 U	94 U	
Fluoranthene	1,700	2,500	110	920	1,300	15,000	920	180	66 J	170	340	390	160	150 J	99 U	61 J	
Indeno(1,2,3-c,d)pyrene	600	690	56 U	140	260	2,600	240	70 J	88 U	58 J	97	130	98 U	96 J	99 U	94 U	
Pyrene	2,600	3,300	100	740	1,200	13,000	770	150	53 J	180	300	310	170	150 J	99 U	71 J	
Total HPAH	12,000	17,000	436 J	3,378 J	5,740	57,360	4,165 J	913 J	229 J	1,018 J	1,657	1,850	1,067 J	1,362 J	138 J	387 J	
Phthalates (ug/kg dw)																	
Bis(2-ethylhexyl)phthalate	1,300	1,900	1,400 B	9,700 B	15,000 B	2,100 B	1,500	360	48 J	1,500	1,000	490	990 B	1,200 B	240 B	300 B	
Butylbenzylphthalate	63	900	92 J	1,400 J	300 J	410 J	280	780	88 U	97 U	97 U	110	83 J	190 U	99 U	94 U	
Diethylphthalate	200	1,200	56 U	56 U	59 U	58 U	95 U	93 U	88 U	97 U	97 U	94 U	98 U	190 U	99 U	94 U	
Dimethylphthalate	71	160	56 U	260	59 U	58 U	95 U	93 U	88 U	97	97 U	94 U	98 U	190 U	99 U	94 U	
Di-n-butylphthalate	1,400	1,400	92	320	50 J	58 U	95 U	93 U	88 U	100	97 U	94 U	98 U	190 U	99 U	94 U	
Di-n-octylphthalate	6,200	NA	56 U	56 U	59 U	58 U	95 U	93 U	88 U	97 U	97 U	94 U	98 U	190 U	99 U	94 U	
PCBs (ug/kg dw)																	
Aroclor 1016			19 U	19 U	19 U	19 U	20 U	19 U	18 U	18 U	19 U	19 U	20 U	20 U	18 U	20 U	
Aroclor 1221			19 U	19 U	19 U	19 U	20 U	19 U	18 U	18 U	19 U	19 U	20 U	20 U	18 U	20 U	
Aroclor 1232			19 U	19 U	19 U	19 U	20 U	19 U	18 U	18 U	19 U	19 U	20 U	20 U	18 U	20 U	
Aroclor 1242			19 U	19 U	19 U	19 U	20 U	19 U	18 U	18 U	19 U	19 U	20 U	20 U	18 U	20 U	
Aroclor 1248			19 U	43	34	19 U	20 U	19 U	18 U	18 U</td							

Table 2: Ecology interagency agreement (2010-2011): SPU source tracing sample results (dry weight).

Sample ID	SQS/ LAET	CSL/ 2LAET	RCB263	RCB264	RCB265	RCB266	RCB267	RCB268	RCB269	RCB270	RCB271	RCB272	RCB159-0	RCB159-3	RCB159-12	RCB273-0
Outfall			7th Ave S SD	Norfolk CSO/SD/P S17 EOF	Norfolk CSO/SD/P S17 EOF	Norfolk CSO/SD/P S17 EOF	S 96th St SD	S 96th St SD	S 96th St SD	Hamm Creek	S 96th St SD	S 96th St SD	7th Ave S SD	7th Ave S SD	7th Ave S SD	7th Ave S SD
Sample type			RCB SD	RCB SD	RCB SD	RCB SD	RCB SD	RCB SD	RCB SD	RCB SD	RCB SD	RCB SD	Soil	Soil	Soil	Soil
Conveyance type ^c			SU75, SW05	SU75, SW05	SU75, SW05	SU75, SW05	SW81, E1100546	SW81, E1100546	SW81, E1100546	SW81, E1100546	SW84, E1100547	SX83	SX83	SX83	SX83	SX83
Date			04/29/11	04/29/11	04/29/11	04/29/11	05/13/11	05/13/11	05/13/11	05/13/11	05/13/11	05/13/11	05/20/11	05/20/11	05/20/11	05/20/11
2,4,5-Trichlorophenol			280 U	280 U	290 U	290 U	470 U	460 U	440 U	480 U	480 U	470 U	490 U	960 U	500 U	470 U
2,4,6-Trichlorophenol			280 U	280 U	290 U	290 U	470 U	460 U	440 U	480 U	480 U	470 U	490 U	960 U	500 U	470 U
2,4-Dichlorophenol			280 U	280 U	290 U	290 U	470 U	460 U	440 U	480 U	480 U	470 U	490 U	960 U	500 U	470 U
2,4-Dimethylphenol ^a	29	29	56 U	56 U	59 U	58 U	95 U	93 U	88 U	97 U	97 U	94 U	98 U	190 U	99 U	94 U
2,4-Dinitrophenol			600 U	600 U	630 U	620 U	1,000 UJ	990 UJ	940 UJ	1,000 UJ	1,000 UJ	1,000 UJ	1,000 U	2,000 U	1,100 U	1,000 U
2,4-Dinitrotoluene			280 U	280 U	290 U	290 U	470 U	460 U	440 U	480 U	480 U	470 U	490 U	960 U	500 U	470 U
2,6-Dinitrotoluene			280 U	280 U	290 U	290 U	470 U	460 U	440 U	480 U	480 U	470 U	490 U	960 U	500 U	470 U
2-Choronaphthalene			56 U	56 U	59 U	58 U	95 U	93 U	88 U	97 U	97 U	94 U	98 U	190 U	99 U	94 U
2-Chlorophenol			56 U	56 U	59 U	58 U	95 U	93 U	88 U	97 U	97 U	94 U	98 U	190 U	99 U	94 U
2-Methylnaphthalene			56 U	110	82	67	95 U	93 U	88 U	97 U	97 U	94 U	98 U	190 U	99 U	94 U
2-Methylphenol ^a	63	63	56 U	56 U	59 U	58 U	95 U	93 U	88 U	97 U	73 J	94 U	98 U	190 U	99 U	94 U
2-Nitroaniline			280 U	280 U	290 U	290 U	470 U	460 U	440 U	480 U	480 U	470 U	490 U	960 U	500 U	470 U
2-Nitrophenol			280 U	280 U	290 U	290 U	470 U	460 U	440 U	480 U	480 U	470 U	490 U	960 U	500 U	470 U
3,3'-Dichlorobenzidine			280 U	280 U	290 U	290 U	470 UJ	460 UJ	440 UJ	480 UJ	480 UJ	470 UJ	490 U	960 U	500 U	470 U
3-Nitroaniline			280 U	280 U	290 U	290 U	470 UJ	460 UJ	440 UJ	480 UJ	480 UJ	470 UJ	490 U	960 U	500 U	470 U
4,6-Dinitro-2-methylphenol			560 U	560 U	590 U	580 U	950 U	930 U	880 U	970 U	970 U	940 U	980 U	1,900 U	990 U	940 U
4-Bromophenyl-phenylether			56 U	56 U	59 U	58 U	95 U	93 U	88 U	97 U	97 U	94 U	98 U	190 U	99 U	94 U
4-Chloro-3-methylphenol			280 U	280 U	290 U	290 U	470 U	460 U	440 U	480 U	480 U	470 U	490 U	960 U	500 U	470 U
4-Chloroaniline			280 U	280 U	290 U	290 U	470 U	460 U	440 U	480 U	480 U	470 U	490 U	960 U	500 U	470 U
4-Chlorophenyl-phenylether			56 U	56 U	59 U	58 U	95 U	93 U	88 U	97 U	97 U	94 U	98 U	190 U	99 U	94 U
4-Methylphenol ^a	670	670	610	510	350	1,900	81 J	93 U	88 U	110	400	110	54 J	190 U	99 U	94 U
4-Nitroaniline			280 U	280 U	290 U	290 U	470 U	460 U	440 U	480 U	480 U	470 U	490 U	960 U	500 U	470 U
4-Nitrophenol			280 U	280 U	290 U	290 U	470 UJ	460 UJ	440 UJ	480 UJ	480 UJ	470 UJ	490 U	960 U	500 U	470 U
Benzoic acid ^a	650	650	140 J	160 J	130 J	400 J	240 J	930 U	880 U	970 U	3,800	940 U	940 J	1,700 J	990 U	370 J
Benzyl alcohol ^a	57	73	56 U	56 U	120	58 U	95 U	93 U	88 U	97 U	270	94 U	3,700	1,600	140	1,500
bis(2-Chloroethoxy) methane			56 U	56 U	59 U	58 U	95 U	93 U	88 U	97 U	97 U	94 U	98 U	190 U	99 U	94 U
Bis-(2-chloroethyl) ether			56 U	56 U	59 U	58 U	95 U	93 U	88 U	97 U	97 U	94 U	98 U	190 U	99 U	94 U
Carbazole			56 U	70	200	1,800	57 J	93 U	88 U	97 U	97 U	94 U	98 U	190 U	99 U	94 U
Dibenzofuran	540	540	56 U	56 U	56 J	320	95 U	93 U	88 U	97 U	97 U	94 U	98 U	190 U	99 U	94 U
Hexachlorobenzene	22	70	56 U	56 U	59 U	58 U	95 U	93 U	88 U	97 U	97 U	94 U	98 U	190 U	99 U	94 U
Hexachlorobutadiene	11	120	56 U	56 U	59 U	58 U	95 U	93 U	88 U	97 U	97 U	94 U	98 U	190 U	99 U	94 U
Hexachlorocyclopentadiene			280 U	280 U	290 U	290 U	470 UJ	460 UJ	440 UJ	480 UJ	480 UJ	470 UJ	490 U	960 UJ	500 UJ	470 UJ
Hexachloroethane			56 U	56 U	59 U	58 U	95 U	93 U	88 U	97 U	97 U	94 U	98 U	190 U	99 U	94 U
Isophorone			56 U	56 U	59 U	58 U	95 U	93 U	88 U	97 U	97 U	94 U	98 U	190 U	99 U	94 U
Nitrobenzene			56 U	56 U	59 U	58 U	95 U	93 U	88 U	97 U	97 U	94 U	98 U	190 U	99 U	94 U
N-Nitroso-di-n-propylamine			56 U	56 U	59 U	58 U	95 U	93 U	88 U	97 U	97 U	94 U	98 U	190 U	99 U	94 U
N-Nitrosodiphenylamine	28	40	56 U	48 J	73	58 U	95 U	93 U	88 U	97 U	97 U	94 U	98 U	190 U	99 U	94 U
Pentachlorophenol ^a	360	690	280 U	280 U	290 U	290 U	470 UJ	460 UJ	440 UJ	480 UJ	480 UJ	470 UJ	490 UJ	960 UJ	500 UJ	470 UJ
Phenol ^a	420	1,200	56	82	190	210	95 U	93 U	88 U	58 J	910	94 U	230	260	99 U	71 J

a. Sediment management standards based on dry weight concentration.

b. Sediment quality standard/lowest apparent effects threshold

c. Cleanup screening level/second lowest apparent effects threshold

d. MTCA Method A soil cleanup level

Bold = Compound detected in sample.

J Value is an estimate

U Target analyte not detected at the reported concentration

R Analytical result is rejected and cannot be used.

Table 2: Ecology interagency agreement (2010-2011): SPU source tracing sample results (dry weight).

Sample ID	SQS/ LAET	CSL/ 2LAET	RCB273-3	RCB273-12	RCB274-0	RCB274-3	RCB274-12	RCB275-0	RCB275-3	RCB275-12	CB108	CB206	CB210	CB211	CB212	CB213
Outfall			7th Ave S SD	2nd Ave S SD	Private SD	Norfolk CSO/SD/P S17 EOF	S Myrtle St SD	S Myrtle St SD	Norfolk CSO/SD/P S17 EOF							
Sample type			Soil SD	RCB	CB	CB	CB	CB	CB							
Conveyance type ^c			SX83	SR72	SR72	SS85	SU75, SW05	SD	SD							
Lab reference														351	174	165
Date			05/20/11	05/20/11	05/20/11	05/20/11	05/20/11	05/20/11	05/20/11	05/20/11	04/13/11	04/13/11	04/20/11	04/29/11	04/29/11	05/02/11
Total solids (%)			81.1	91.9	69.1	78.0	89.5	78.4	67.3	91.1	72.1	58.6	63.4	37.9	62.3	69.7
TOC (%)			6.99	1.04	6.05	4.00	4.57	10.10	11.90	2.29	5.18	11.00	18.20	9.33	8.12	6.05
Metals (mg/kg dw)																
Arsenic	57	93	210	22	195	10	544	430	38	10	12	11	20	10	10	30
Copper	390	390	232	26	391	19	2,730	1,890	419	302	557	58	1,930	264	264	388
Lead	450	530	20	6	66	26	5	1,040	995	129	62	400	34	351	174	165
Mercury	0.41	0.59	0.13	0.05	0.19	0.10	0.08	0.20	0.17	0.11	0.04	0.74	0.05	0.38	0.38	0.08
Zinc	410	960	341	55	454	347	40	938	733	128	315 J	4,150 J	193	5,240	1,260	1,190
Total petroleum hydrocarbons (mg/kg dw)																
TPH-diesel	2,000 ^b	2,000 ^b	61 U	55 U	69 U	59 U	55 U	510	560	160	1,800	8,800	1,000	14,000	860	7,600
TPH-oil	2,000 ^b	2,000 ^b	250	110 U	550	120	110 U	3,700	2,900	610	7,900	38,000	14,000	10,000	4,300	24,000
LPAH (ug/kg dw)																
Acenaphthene	500	500	93 U	18 U	94 U	19 U	19 U	190 U	200 U	98 U	190 U	390 J	400	57 U	57 UJ	280
Acenaphthylene	1,300	1,300	93 U	18 U	94 U	19 U	19 U	190 U	200 U	98 U	220	560 U	290 U	57 U	57 UJ	130 U
Anthracene	960	960	93 U	18 U	94 U	19 U	19 U	190 U	200 U	98 U	130 J	870	720	57 U	140 J	470
Fluorene	540	540	93 U	18 U	94 U	19 U	19 U	190 U	200 U	98 U	200	960	530	1,200	34 J	150
Naphthalene	2,100	2,100	93 U	18 U	94 U	19 U	19 U	190 U	200 U	98 U	560	1,400	490	350 NJ	48 J	130
Phenanthrene	1,500	1,500	93 U	19	94 U	15 J	13 J	100 J	200 U	54 J	640	5,000	3,500 B	1,100	1,000 J	2,500
Total LPAH	5,200	5,200	93 U	19	94	15 J	13 J	100 J	200 U	54 J	1,750 J	8,620 J	5,640 B	2,650 NJ	1,222 J	3,530
HPAH (ug/kg dw)																
Benzo(a)anthracene	1,300	1,600	93 U	18 U	94 U	19 U	19 U	170 J	200 U	98 U	110 J	2,200	1,400	160	320 J	920
Benzo(a)pyrene	1,600	1,600	93 U	18 U	94 U	14 J	19 U	250	200	78 J	100 J	1,800	1,500	140	120 J	680
Total benzofluoranthenes	3,200	3,600	93 U	18 U	75 J	28	19 U	300	230	78 J	150 JQ	1,700 J	1,200	180	130 J	440
Benzo(g,h,i)perylene	670	720	93 U	10 J	94	39	19 U	670	510	170	230	4,400	2,700	390	370 J	1,400
Chrysene	1,400	2,800	93 U	9 J	66 J	23	19 U	570	420	88 J	270	3,500	2,400	420	470 J	1,300
Dibenz(a,h)anthracene	230	230	93 U	18 U	94 U	19 U	19 U	190 U	200 U	98 U	190 U	340 J	380 J	37 J	57 UJ	140
Fluoranthene	1,700	2,500	93 U	18 U	56 J	25	10 J	290	210	93 J	360	7,000	3,400	470	1,600 J	3,100
Indeno(1,2,3-c,d)pyrene	600	690	93 U	18 U	94 U	19 U	19 U	150 J	200 U	49 J	190 U	1,400 J	860 J	120	74 J	360
Pyrene	2,600	3,300	93 U	10 J	61 J	25	9 J	460	320	110	470	5,800	3,500	820	1,400 J	2,800
Total HPAH	12,000	17,000	93 U	29 J	352 J	154 J	19 J	2,860 J	1,890	666 J	1,690 J	28,140 J	17,340 J	2,737 J	4,484 J	11,140
Phthalates (ug/kg dw)																
Bis(2-ethylhexyl)phthalate	1,300	1,900	93 U	31 B	290 B	120 B	23 B	2,300 B	1,700 B	98 B	8,700	41,000	10,000	14,000 B	11,000 J	59,000 B
Butylbenzylphthalate	63	900	93 U	18 U	94 U	12 J	19 U	450	4,900	98 U	520 J	6,400 J	330 J	660 J	800 J	130 U
Diethylphthalate	200	1,200	93 U	45 U	94 U	19 U	19 U	190 U	200 U	98 U	190 U	560 U	290 U	57 U	57 UJ	130 U
Dimethylphthalate	71	160	93 U	18 U	94 U	19 U	19 U	180 J	130 J	98 U	840	560 U	290 U	57 U	160 J	130 U
Di-n-butylphthalate	1,400	1,400	93 U	18 U	94 U	19 U	19 U	190 U	200 U	98 U	150 J	32,000	1,500	57 U	57 UJ	130 U
Di-n-octylphthalate	6,200	NA	93 U	18 U	94 U	19 U	19 U	190 U	200 U	98 U	190 U	2,000	320	1,200	57 UJ	4,500
PCBs (ug/kg dw)																
Aroclor 1016			19 U	20 U	20 U	19 U	18 U	20 U	20 U	19 U	20 U	82 U	38 U	20 U	19 U	19 U
Aroclor 1221			19 U	20 U	20 U	19 U	18 U	20 U	20 U	19 U	20 U	82 U	38 U	20 U	19 U	19 U
Aroclor 1232			19 U	20 U	20 U	19 U	18 U	20 U	20 U	19 U	20 U	82 U	38 U	20 U	19 U	19 U
Aroclor 1242			19 U	20 U	20 U	19 U	18 U	20 U	20 U	19 U	20 U	1,800	38 U	20 U	19 U	19 U
Aroclor 1248			19 U	20 U	69 Y	19 U	18 U	75 Y	49 Y	19 U	20 U	82 U	38 U	330	100	47 Y
Aroclor 1254			74	22	220	50	21	210	120	80	20 U	580	38 U	550	150	140
Aroclor 1260			27	20 U	41	19 U	18 U	70	55	68	54 J	290 Y	38 U	140	110	40
Total PCBs	130															

Table 2: Ecology interagency agreement (2010-2011): SPU source tracing sample results (dry weight).

Sample ID	SQS/ LAET	CSL/ 2LAET	RCB273-3	RCB273-12	RCB274-0	RCB274-3	RCB274-12	RCB275-0	RCB275-3	RCB275-12	CB108	CB206	CB210	CB211	CB212	CB213
Outfall			7th Ave S SD	2nd Ave S SD	Private SD	Norfolk CSO/SD/P S17 EOF	S Myrtle St SD	S Myrtle St SD	Norfolk CSO/SD/P S17 EOF							
Sample type			Soil	RCB	CB	CB	CB	CB	CB							
Conveyance type ^c			SD	SD	SD	SD	SD	SD								
Lab reference			SX83	SR72	SR72	SS85	SU75, SW05	SU75, SW05	SV01							
Date			05/20/11	05/20/11	05/20/11	05/20/11	05/20/11	05/20/11	05/20/11	05/20/11	04/13/11	04/13/11	04/20/11	04/29/11	04/29/11	05/02/11
2,4,5-Trichlorophenol			460 U	91 U	470 U	97 U	93 U	950 U	990 U	490 U	950 U	2,800 U	1,400 U	290 UJ	280 UJ	630 U
2,4,6-Trichlorophenol			460 U	91 U	470 U	97 U	93 U	950 U	990 U	490 U	950 U	2,800 U	1,400 U	290 UJ	280 UJ	630 U
2,4-Dichlorophenol			460 U	180 U	470 U	97 U	93 U	950 U	990 U	490 U	950 U	2,800 U	1,400 U	290 UJ	280 UJ	630 U
2,4-Dimethylphenol ^a	29	29	93 U	36 U	94 U	19 U	19 U	190 U	200 U	98 U	190 U	560 U	290 U	57 UJ	57 UJ	130 U
2,4-Dinitrophenol			990 U	770 U	1,000 U	210 U	200 U	2,000 U	2,100 U	1,000 U	2,000 UJ	6,000 UJ	3,100 U	610 UJ	600 UJ	1,400 U
2,4-Dinitrotoluene			460 U	91 U	470 U	97 U	93 U	950 U	990 U	490 U	950 U	2,800 U	1,400 U	290 U	280 UJ	630 U
2,6-Dinitrotoluene			460 U	91 U	470 U	97 U	93 U	950 U	990 U	490 U	950 U	2,800 U	1,400 U	290 U	280 UJ	630 U
2-Choronaphthalene			93 U	18 U	94 U	19 U	19 U	190 U	200 U	98 U	190 U	560 U	290 U	57 U	57 UJ	130 U
2-Chlorophenol			93 U	18 U	94 U	19 U	19 U	190 U	200 U	98 U	190 U	560 U	290 U	57 U	57 UJ	130 U
2-Methylnaphthalene			93 U	19	94 U	19 U	19 U	190 U	200 U	98 U	170 J	3,300	420	2,000	65 J	260
2-Methylphenol ^a	63	63	93 U	18 U	94 U	19 U	19 U	190 U	200 U	98 U	190 U	560 U	290 U	57 UJ	57 UJ	130 U
2-Nitroaniline			460 U	91 U	470 U	97 U	93 U	950 U	990 U	490 U	950 U	2,800 U	1,400 U	290 U	280 UJ	630 U
2-Nitrophenol			460 U	91 U	470 U	97 U	93 U	950 U	990 U	490 U	950 U	2,800 U	1,400 U	290 UJ	280 UJ	630 U
3,3'-Dichlorobenzidine			460 U	140 UJ	470 U	97 U	93 U	950 U	990 U	490 U	950 U	2,800 U	1,400 U	290 U	280 UJ	630 U
3-Nitroaniline			460 U	91 U	470 U	97 U	93 U	950 U	990 U	490 U	950 U	2,800 U	1,400 U	290 U	280 UJ	630 U
4,6-Dinitro-2-methylphenol			930 U	180 U	940 U	190 U	190 U	1,900 U	2,000 U	980 U	1,900 U	5,600 U	2,900 U	570 UJ	570 UJ	1,300 U
4-Bromophenyl-phenylether			93 U	18 U	94 U	19 U	19 U	190 U	200 U	98 U	190 U	560 U	290 U	57 U	57 UJ	130 U
4-Chloro-3-methylphenol			460 U	91 U	470 U	97 U	93 U	950 U	990 U	490 U	950 U	2,800 U	1,400 U	290 U	280 UJ	630 U
4-Chloroaniline			460 U	240 U	470 U	97 U	93 U	950 U	990 U	490 U	950 U	2,800 U	1,400 U	290 U	280 UJ	630 U
4-Chlorophenyl-phenylether			93 U	18 U	94 U	19 U	19 U	190 U	200 U	98 U	190 U	560 U	290 U	57 U	57 UJ	130 U
4-Methylphenol ^a	670	670	93 U	36 U	94 U	19 U	19 U	190 U	200 U	98 U	1,300	340 J	260 J	1,400 J	6,500 J	88 J
4-Nitroaniline			460 U	91 U	470 U	97 U	93 U	950 U	990 U	490 U	950 U	2,800 U	1,400 U	290 U	280 UJ	630 U
4-Nitrophenol			460 U	91 U	470 U	97 U	93 U	950 U	990 U	490 U	950 U	2,800 U	1,400 U	290 UJ	280 UJ	630 U
Benzoic acid ^a	650	650	930 U	360 U	440 J	150 J	190 U	340 J	690 J	980 U	1,900 U	5,600 U	2,900 U	1,400 J	130 J	1,300 U
Benzyl alcohol ^a	57	73	320	18 U	2,000	250	19 U	110 J	280	98 U	230	390 J	290 U	57 UJ	57 UJ	130 U
bis(2-Chloroethoxy) methane			93 U	18 U	94 U	19 U	19 U	190 U	200 U	98 U	190 U	560 U	290 U	57 U	57 UJ	130 U
Bis-(2-chloroethyl) ether			93 U	18 U	94 U	19 U	19 U	190 U	200 U	98 U	190 U	560 U	290 U	57 U	57 UJ	130 U
Carbazole			93 U	18 U	94 U	19 U	19 U	190 U	200 U	98 U	190 U	620	490	57 U	68 J	130 U
Dibenzofuran	540	540	93 U	18 U	94 U	19 U	19 U	190 U	200 U	98 U	190 U	420 J	240 J	57 U	57 UJ	150
Hexachlorobenzene	22	70	93 U	18 U	94 U	19 U	19 U	190 U	200 U	98 U	190 U	560 U	290 U	57 U	57 UJ	130 U
Hexachlorobutadiene	11	120	93 U	91 U	94 U	19 U	19 U	190 U	200 U	98 U	190 U	560 U	290 U	57 U	57 UJ	130 U
Hexachlorocyclopentadiene			460 UJ	360 UJ	470 UJ	97 UJ	93 UJ	950 UJ	990 UJ	490 UJ	950 U	2,800 U	1,400 U	290 U	280 UJ	630 U
Hexachloroethane			93 U	18 U	94 U	19 U	19 U	190 U	200 U	98 U	190 U	560 U	290 U	57 U	57 UJ	130 U
Isophorone			93 U	18 U	94 U	19 U	19 U	190 U	200 U	98 U	190 U	1,100	290 U	57 U	57 UJ	130 U
Nitrobenzene			93 U	18 U	94 U	19 U	19 U	190 U	200 U	98 U	190 U	560 U	290 U	57 U	57 UJ	130 U
N-Nitroso-di-n-propylamine			93 U	18 U	94 U	19 U	19 U	190 U	200 U	98 U	190 U	560 U	290 U	57 U	57 UJ	130 U
N-Nitrosodiphenylamine	28	40	93 U	18 U	94 U	19 U	19 U	190 U	200 U	98 U	130 J	990	290 U	57 U	57 UJ	130 U
Pentachlorophenol ^a	360	690	460 UJ	180 UJ	470 UJ	97 UJ	93 UJ	950 UJ	990 UJ	490 UJ	950 UJ	2,800 UJ	1,400 UJ	290 UJ	280 UJ	630 U
Phenol ^a	420	1,200	93 U	18 U	75 J	27	19 U	100 J	150 J	98 U	690	9,300	290 U	340 J	420 J	240 NJ

a. Sediment management standards based on dry weight concentration.

b. Sediment quality standard/lowest apparent effects threshold

c. Cleanup screening level/second lowest apparent effects threshold

d. MTCA Method A soil cleanup level

Bold = Compound detected in sample.

Table 2: Ecology interagency agreement (2010-2011): SPU source tracing sample results (dry weight).

Sample ID	SQS/ LAET	CSL/ 2LAET	CB165	RCB276	RCB277	RCB278	RCB279	RCB280	MH210	T2B	MH245	ST1	MH246	RCB281	MH116	MH101
Outfall			Port SD-T115	7th Ave S SD	Diagonal Ave S CSO/SD	Norfolk CSO/SD/P S17 EOF	Norfolk CSO/SD/P S17 EOF	WSDOT S Ryan St SD	S Brighton St CSO/SD							
Sample type			Inline SD	RCB SD	RCB SD	RCB SD	RCB SD	RCB SD	Inline SD	Inline SD	Inline SD	Inline SD	RCB SD	RCB SD	Inline SD	Inline SD
Conveyance type ^c			TM02, TN38	TR70, TT18	TR70	TR70	TR70, TT18	TR70	TS74	TS74	TT36	TT36	TT60	TT60	TT60	TV56
Date			09/12/11	10/12/11	10/12/11	10/12/11	10/12/11	10/12/11	10/19/11	10/19/11	10/24/11	10/24/11	10/25/11	10/25/11	11/02/11	11/04/11
Total solids (%)			24.9	71.7	33.7	49.3	72.2	64.9	80.8	46.4	86.1	76.4	75.0	68.5	83.7	85.4
TOC (%)			9.85	9.11	9.95	11.30	5.56	4.90	6.57	6.68	1.56	2.88	0.78	8.21	1.17	1.23
Metals (mg/kg dw)																
Arsenic	57	93	12	6	20	20	15	9	6 U	10	6 U	6 U	7	7 U	10 U	6
Copper	390	390	501	532	320	372	119	110	46	143	39	51	24	175 J	44 J	36 J
Lead	450	530	255	230	387	538	86	40	21	83	49	44	10	32 J	330 J	15 J
Mercury	0.41	0.59	0.13	0.58	0.41	1.47	0.32	0.13	0.03	0.17	0.02 U	0.06	0.03	0.03	0.03 U	0.02 U
Zinc	410	960	5,000	858	1,660	3,670	539	312	139	402	145 J	184	105	355	201	143 J
Total petroleum hydrocarbons (mg/kg dw)																
TPH-diesel	2,000 ^b	2,000 ^b	3,500	1,500	2,500	2,000 U	2,500	270	120	650	59 U	110	64 U	88	44	35
TPH-oil	2,000 ^b	2,000 ^b	13,000	5,300	11,000	6,700	5,400	1,700	710	2,900	250	660	130 U	690	240	110
LPAH (ug/kg dw)																
Acenaphthene	500	500	320 U	190 U	340 U	280 U	220 U	97 U	10 J	230 U	59 U	19 U	55 U	58 U	58 U	18 U
Acenaphthylene	1,300	1,300	320 U	190 U	340 U	280 U	220 U	97 U	19 U	230 U	59 U	19 U	55 U	58 U	58 U	18 U
Anthracene	960	960	440	190 U	340 U	320	220 U	97 U	10 J	230 U	59 U	19 U	55 U	41 J	58 U	18 U
Fluorene	540	540	520	190 U	340 U	280 U	220 U	97 U	19 U	230 U	59 U	19 U	33 J	58 U	58 U	18 U
Naphthalene	2,100	2,100	320	190 U	340 U	280 U	220 U	97 U	22	230 U	59 U	19 U	55 U	41 J	58 U	18 U
Phenanthrene	1,500	1,500	2,200	320	1,500	1,100	97 U	67	140 J	30 J	19 U	880	200	58 U	11 J	
Total LPAH	5,200	5,200	3,480	320	1,500	1,820	1,100	97 U	109	140 J	30 J	19 U	913	282 J	58 U	11 J
HPAH (ug/kg dw)																
Benzo(a)anthracene	1,300	1,600	580	190 U	1,000	2,300	830	97 U	44	140 J	59 U	19 U	310	180	58 U	18 U
Benzo(a)pyrene	1,600	1,600	420	190 U	890	2,400	570	97 U	62	170 J	30 J	9 J	290	260	58 U	13 J
Total benzofluoranthenes	3,200	3,600	1,700	450	2,200	4,600	1,300	220	120	460	59	20	660	480	58	26
Benzo(g,h,i)perylene	670	720	730	250	970	1,900	410	130	72	340	59 U	19 U	170	340	58 U	21
Chrysene	1,400	2,800	1,700	400	1,800	2,700	1,000	200	100	350	62	10 J	690	290	58 U	22
Dibenz(a,h)anthracene	230	230	320 U	190 U	340 U	560	220 U	97 U	20	230 U	59 U	19 U	61	58 U	18 U	
Fluoranthene	1,700	2,500	2,900	440	2,800	4,200	2,800	160	140	400	56 J	10 J	1,800	420	35 J	20
Indeno(1,2,3-c,d)pyrene	600	690	370	190 U	570	1,500	270	97 U	42	160 J	59 U	19 U	150	190	58 U	11 J
Pyrene	2,600	3,300	2,600	480	2,200	3,600	2,100	260	150	680	65	16 J	1,400	450	40 J	23
Total HPAH	12,000	17,000	11,000	2,020	12,430	23,760	9,280	970	750	2,700 J	272	65 J	5,531	2,671	133 J	136 J
Phthalates (ug/kg dw)																
Bis(2-ethylhexyl)phthalate	1,300	1,900	25,000	14,000 B	20,000 B	37,000 B	4,000 B	1,700 B	1,400 B	6,800 B	500	57	870	1,900	350 B	170 B
Butylbenzylphthalate	63	900	7,200 J	700	2,300	7,500	220 U	130	92	180 J	59 U	19 U	71,000	310	58 U	48
Diethylphthalate	200	1,200	810 U	480 U	840 U	700 U	540 U	240 U	48 U	570 U	150 U	46 U	140 U	140 U	140 U	46 U
Dimethylphthalate	71	160	320 U	190 U	350	510	220 U	620	19 U	230 U	59 U	19 U	55 U	58 U	58 U	18 U
Di-n-butylphthalate	1,400	1,400	260 J	210	1,100	2,300	220 U	97 U	19 U	230 U	59 U	19 U	130	67	58 U	18 U
Di-n-octylphthalate	6,200	NA	8,500	470 U	1,900 U	7,700	500 U	110 U	140	420	59 U	47	3,800	170	35 J	18 U
PCBs (ug/kg dw)																
Aroclor 1016			20 U	92 U	98 U	980 U	94 U	96 U	18 UJ	19 U	20 U	19 U	19 U	19 U	18 U	18 U
Aroclor 1221			20 U	92 U	98 U	980 U	94 U	96 U	18 U	19 U	20 U	19 U	19 U	19 U	18 U	18 U
Aroclor 1232			20 U	92 U	98 U	980 U	94 U	96 U	23 Y	19 U	20 U	19 U	19 U	19 U	18 U	18 U
Aroclor 1242			20 U	360	200	4,300	94 U	96 U	18 UJ	19 U	20 U	19 U	19 U	19 U	18 U	18 U
Aroclor 1248			160	92 U	98 U	980 U	94 U	96 U	18 UJ	130	30	21	19 U	19 U	18 U	18 U
Aroclor 1254																

Table 2: Ecology interagency agreement (2010-2011): SPU source tracing sample results (dry weight).

Sample ID	SQS/ LAET	CSL/ 2LAET	CB165	RCB276	RCB277	RCB278	RCB279	RCB280	MH210	T2B	MH245	ST1	MH246	RCB281	MH116	MH101
Outfall			Port SD-T115	7th Ave S SD	Diagonal Ave S CSO/SD	Norfolk CSO/SD/P S17 EOF	Norfolk CSO/SD/P S17 EOF	WSDOT S Ryan St SD	S Brighton St CSO/SD							
Sample type			Inline SD	RCB SD	RCB SD	RCB SD	RCB SD	RCB SD	Inline SD	Inline SD	Inline SD	Inline SD	RCB SD	RCB SD	Inline SD	Inline SD
Conveyance type^c			TM02, TN38	TR70, TT18	TR70	TR70	TR70, TT18	TR70	TS74	TS74	TT36	TT36	TT60	TT60	TT60	TV56
Date			09/12/11	10/12/11	10/12/11	10/12/11	10/12/11	10/12/11	10/19/11	10/19/11	10/24/11	10/24/11	10/25/11	10/25/11	11/02/11	11/04/11
2,4,5-Trichlorophenol			1,600 U	960 U	1,700 U	1,400 U	1,100 U	480 U	96 U	1,100 U	300 U	93 U	280 U	290 U	290 U	92 U
2,4,6-Trichlorophenol			1,600 U	960 U	1,700 U	1,400 U	1,100 U	480 U	96 U	1,100 U	300 U	93 U	280 U	290 U	290 U	92 U
2,4-Dichlorophenol			3,200 U	1,900 U	3,400 U	2,800 U	2,200 U	970 U	190 U	2,300 U	590 U	190 U	550 U	580 U	580 U	180 U
2,4-Dimethylphenol ^a	29	29	650 U	380 U	670 U	560 U	430 U	190 U	38 U	460 U	120 U	37 U	110 U	120 U	120 U	37 U
2,4-Dinitrophenol			14,000 R	8,200 UJ	14,000 UJ	12,000 UJ	9,100 UJ	4,100 UJ	810 U	9,700 U	2,500 U	790 U	2,400 U	2,500 U	2,400 U	780 U
2,4-Dinitrotoluene			1,600 UJ	960 U	1,700 U	1,400 U	1,100 U	480 U	96 U	1,100 U	300 U	93 U	280 U	290 U	290 U	92 U
2,6-Dinitrotoluene			1,600 UJ	960 U	1,700 U	1,400 U	1,100 U	480 U	96 U	1,100 U	300 U	93 U	280 U	290 U	290 U	92 U
2-Choronaphthalene			320 U	190 U	340 U	280 U	220 U	97 U	19 U	230 U	59 U	19 U	55 U	58 U	58 U	18 U
2-Chlorophenol			320 U	190 U	340 U	280 U	220 U	97 U	19 U	230 U	59 U	19 U	55 U	58 U	58 U	18 U
2-Methylnaphthalene			700	220	370	280 U	220 U	97 U	14 J	230 U	59 U	19 U	55 U	58 U	58 U	18 U
2-Methylphenol ^a	63	63	320 U	190 U	340 U	280 U	220 U	97 U	19 U	230 U	59 U	19 U	55 U	58 U	58 U	18 U
2-Nitroaniline			1,600 U	960 U	1,700 U	1,400 U	1,100 U	480 U	96 U	1,100 U	300 U	93 U	280 U	290 U	290 U	92 U
2-Nitrophenol			1,600 R	960 U	1,700 U	1,400 U	1,100 U	480 U	96 U	1,100 U	300 U	93 U	280 U	290 U	290 U	92 U
3,3'-Dichlorobenzidine			2,400 R	1,400 U	2,500 U	2,100 U	1,600 U	720 U	140 U	1,700 U	440 U	140 U	420 U	440 U	430 U	140 U
3-Nitroaniline			1,600 UJ	960 U	1,700 U	1,400 U	1,100 U	480 U	96 U	1,100 U	300 U	93 U	280 U	290 U	290 U	92 U
4,6-Dinitro-2-methylphenol			3,200 U	1,900 U	3,400 U	2,800 U	2,200 U	970 U	190 U	2,300 U	590 U	190 U	550 U	580 U	580 U	180 U
4-Bromophenyl-phenylether			320 U	190 U	340 U	280 U	220 U	97 U	19 U	230 U	59 U	19 U	55 U	58 U	58 U	18 U
4-Chloro-3-methylphenol			1,600 R	960 U	1,700 U	1,400 U	1,100 U	480 U	96 U	1,100 U	300 U	93 U	280 U	290 U	290 U	92 U
4-Chloroaniline			4,400 U	2,600 U	4,500 U	3,800 U	2,900 U	1,300 U	260 U	3,100 U	800 U	250 U	750 U	790 U	780 U	250 U
4-Chlorophenyl-phenylether			320 U	190 U	340 U	280 U	220 U	97 U	19 U	230 U	59 U	19 U	55 U	58 U	58 U	18 U
4-Methylphenol ^a	670	670	320 J	3,200	1,000	11,000	430 U	190 U	38 U	460 U	120 U	37 U	110 U	120 U	120 U	16 J
4-Nitroaniline			1,600 U	960 U	1,700 U	1,400 U	1,100 U	480 U	96 U	1,100 U	300 UJ	93 UJ	280 UJ	290 UJ	290 U	92 U
4-Nitrophenol			1,600 U	960 U	1,700 U	1,400 U	1,100 U	480 U	96 UJ	1,100 U	300 UJ	93 UJ	280 UJ	290 UJ	290 U	92 U
Benzoic acid ^a	650	650	2,300 R	3,800 U	6,700 U	5,600 U	4,300 U	1,900 U	100 J	4,600 U	1,200 U	370 U	1,100 U	380 J	1,200 U	150 J
Benzyl alcohol ^a	57	73	320 U	190 U	340 U	280 U	220 U	220	22 Y	230 U	59 U	19 U	55 U	740	58 U	18 U
bis(2-Chloroethoxy) methane			320 U	190 U	340 U	280 U	220 U	97 U	19 U	230 U	59 U	19 U	55 U	58 U	58 U	18 U
Bis-(2-chloroethyl) ether			320 U	190 U	340 U	280 U	220 U	97 U	19 U	230 U	59 U	19 U	55 U	58 U	58 U	18 U
Carbazole			260 J	190 U	390	460	220 U	97 U	14 J	230 U	59 U	19 U	170	38 J	58 UJ	18 UJ
Dibenzofuran	540	540	200 J	190 U	340 U	280 U	220 U	97 U	19 U	230 U	59 U	19 U	55 U	58 U	58 U	18 U
Hexachlorobenzene	22	70	320 U	190 U	340 U	280 U	220 U	97 U	19 UJ	230 U	59 U	19 U	55 U	58 U	58 U	18 U
Hexachlorobutadiene	11	120	1,600 U	960 U	1,700 U	1,400 U	1,100 U	480 U	96 U	1,100 U	300 U	93 U	280 U	290 U	290 U	92 U
Hexachlorocyclopentadiene			6,500 R	3,800 U	6,700 U	5,600 U	4,300 U	1,900 U	380 UJ	4,600 U	1,200 UJ	370 UJ	1,100 UJ	1,200 U	1,200 U	370 U
Hexachloroethane			320 U	190 U	340 U	280 U	220 U	97 U	19 U	230 U	59 U	19 U	55 U	58 U	58 U	18 U
Isophorone			320 U	190 U	340 U	280 U	220 U	97 U	19 U	230 U	59 U	19 U	55 U	58 U	58 U	18 U
Nitrobenzene			320 U	190 U	340 U	280 U	220 U	97 U	19 U	230 U	59 U	19 U	55 U	58 U	58 U	18 U
N-Nitroso-di-n-propylamine			320 U	190 U	340 U	280 U	220 U	97 U	19 U	230 U	59 U	19 U	55 U	58 U	58 U	18 U
N-Nitrosodiphenylamine	28	40	320 U	190 U	340 U	280 U	220 U	97 U	19 U	230 U	59 U	19 U	55 U	58 U	58 U	18 U
Pentachlorophenol ^a	360	690	3,200 U	1,900 U	3,400 U	2,800 U	2,200 U	970 U	190 UJ	2,300 U	590 UJ	190 UJ	550 UJ	580 UJ	580 U	180 U
Phenol ^a	420	1,200	1,200	190 U	420	1,800	220 U	100	14 J	230 U	59 U	19 U	55 U	50 J	58 U	11 J

Table 2: Ecology interagency agreement (2010-2011): SPU source tracing sample results (dry weight).

Sample ID	SQS/ LAET	CSL/ 2LAET	MH14
Outfall		Diagonal Ave S CSO/SD	
Sample type		Inline	
Conveyance type ^c		SD	
Lab reference		TW91	
Date	11/14/11		
Total solids (%)	81.2		
TOC (%)	1.59		
Metals (mg/kg dw)			
Arsenic	57	93	6 U
Copper	390	390	36 J
Lead	450	530	20
Mercury	0.41	0.59	0.04
Zinc	410	960	161 J
Total petroleum hydrocarbons (mg/kg dw)			
TPH-diesel	2,000 ^b	2,000 ^b	80
TPH-oil	2,000 ^b	2,000 ^b	320
LPAH (ug/kg dw)			
Acenaphthene	500	500	20 U
Acenaphthylene	1,300	1,300	20 U
Anthracene	960	960	20 U
Fluorene	540	540	20 U
Naphthalene	2,100	2,100	22
Phenanthrene	1,500	1,500	54
Total LPAH	5,200	5,200	76
HPAH (ug/kg dw)			
Benzo(a)anthracene	1,300	1,600	25
Benzo(a)pyrene	1,600	1,600	36
Total benzofluoranthenes	3,200	3,600	68
Benzo(g,h,i)perylene	670	720	26
Chrysene	1,400	2,800	56
Dibenz(a,h)anthracene	230	230	20 U
Fluoranthene	1,700	2,500	89
Indeno(1,2,3-c,d)pyrene	600	690	15 J
Pyrene	2,600	3,300	88 J
Total HPAH	12,000	17,000	403 J
Phthalates (ug/kg dw)			
Bis(2-ethylhexyl)phthalate	1,300	1,900	1,000 B
Butylbenzylphthalate	63	900	40
Diethylphthalate	200	1,200	49 U
Dimethylphthalate	71	160	32
Di-n-butylphthalate	1,400	1,400	20 U
Di-n-octylphthalate	6,200	NA	610
PCBs (ug/kg dw)			
Aroclor 1016		20 U	
Aroclor 1221		20 U	
Aroclor 1232		20 U	
Aroclor 1242		20 U	
Aroclor 1248		20 U	
Aroclor 1254		20 UJ	
Aroclor 1260		20 U	
Total PCBs	130	1,000	20 UJ
Other organic compounds (ug/kg dw)			
1,2,4-Trichlorobenzene		20 U	
1,2-Dichlorobenzene		20 U	
1,3-Dichlorobenzene		20 U	
1,4-Dichlorobenzene		20 U	
1-Methylnaphthalene		20 U	
2,2'-Oxybis(1-chloropropane)		20 U	

Table 2: Ecology interagency agreement (2010-2011): SPU source tracing sample results (dry weight).

Sample ID	SQS/ LAET	CSL/ 2LAET	MH14
Outfall			Diagonal Ave S CSO/SD
Sample type			Inline
Conveyance type ^c			SD
Lab reference			TW91
Date			11/14/11
2,4,5-Trichlorophenol			97 U
2,4,6-Trichlorophenol			97 U
2,4-Dichlorophenol			200 U
2,4-Dimethylphenol ^a	29	29	39 U
2,4-Dinitrophenol			830 UJ
2,4-Dinitrotoluene			97 U
2,6-Dinitrotoluene			97 U
2-Choronaphthalene			20 U
2-Chlorophenol			20 U
2-Methylnaphthalene			20 U
2-Methylphenol ^a	63	63	20 U
2-Nitroaniline			97 U
2-Nitrophenol			97 U
3,3'-Dichlorobenzidine			150 U
3-Nitroaniline			97 U
4,6-Dinitro-2-methylphenol			200 U
4-Bromophenyl-phenylether			20 U
4-Chloro-3-methylphenol			97 U
4-Chloroaniline			260 U
4-Chlorophenyl-phenylether			20 U
4-Methylphenol ^a	670	670	39 U
4-Nitroaniline			97 U
4-Nitrophenol			97 U
Benzoic acid ^a	650	650	390 U
Benzyl alcohol ^a	57	73	2,600
bis(2-Chloroethoxy) methane			20 U
Bis-(2-chloroethyl) ether			20 U
Carbazole			20 U
Dibenzofuran	540	540	20 U
Hexachlorobenzene	22	70	20 U
Hexachlorobutadiene	11	120	97 U
Hexachlorocyclopentadiene			390 U
Hexachloroethane			20 U
Isophorone			20 U
Nitrobenzene			20 U
N-Nitroso-di-n-propylamine			20 U
N-Nitrosodiphenylamine	28	40	20 U
Pentachlorophenol ^a	360	690	200 U
Phenol ^a	420	1,200	21

Table 3: Ecology interagency agreement (2010-2011): dioxins/furans (ng/kg).

	ST1-043010G	ST3-043010	ST5-043010	EWWST5-050310	1ST-ST1-110410-G	HC-ST1-110410-G	HC-ST1-110410	1st-ST3-111110-G	ID-ST2-111810-G	96-ST2-120110-G	KCIA2-ST1-120310	KCIA1-ST1-120310	RCB232-032411	RCB233-032411	RCB234-032411
Analyte Name	E1100372-001	E1100372-002	E1100372-003	E1100454-001	E1100374-001	E1100374-002	E1100374-003	E1100373-001	E1100371-001	E1100455-001	E1100370-001	E1100370-002	E1100318-001	E1100318-002	E1100318-003
	04/30/10	04/30/10	04/30/10	05/06/10	11/04/10	11/04/10	11/04/10	11/11/10	11/18/10	12/01/10	12/03/10	12/03/10	03/24/11	03/24/11	03/24/11
2,3,7,8-TCDD	4.93	0.0735 U	0.317 U	1.16 J	0.47 U	0.0772 U	0.0608 U	0.146 U	0.431 U	0.319 U	0.182 U	0.207 U	0.181 U	0.148 U	0.113 U
1,2,3,7,8-PeCDD	12.9	0.428 J	2.02 J	8.45	1.57 J	0.171 J	0.215 J	0.119 U	2.79 J	0.577 J	0.157 U	0.448 J	0.562 J	2.99 J	0.775 U
1,2,3,4,7,8-HxCDD	19.7	0.725 J	4.66	14.2	3.18 J	0.223 J	0.343 J	0.427 U	4.96	0.926 J	0.169 U	0.333 J	0.92 J	5.29 J	1.1 J
1,2,3,6,7,8-HxCDD	76.6	2.69 J	16.9	39.1	15	0.527 J	0.729 J	0.723 J	20.5	2.24 J	0.798 U	1.36 J	2.79 J	15	3.52 J
1,2,3,7,8,9-HxCDD	53.2	1.86 J	10.5	30.1	9.5	0.55 J	0.651 J	0.86 J	13.7	1.46 J	0.493 J	1.21 J	2.16 J	10.8	3.42 J
1,2,3,4,6,7,8-HpCDD	2030	58.2	284	922	409	20.4	11.6	8.54	353	52.8	4.67 J	17.9	69.2	273	88.6
OCDD	24,700 J	551	1,850	6,420 J	3,340	301	80	48	2,650	391	22.5	120	952	2,350	671
2,3,7,8-TCDF	34.3	0.627 J	0.683 U	2.38	1.25 J	0.0562 U	0.11 U	0.149 U	2.96	0.73 U	0.241 U	0.252 UJ	0.386 U	1.65 J	0.8 J
1,2,3,7,8-PeCDF	13.1	0.266 U	0.573 U	6.44	0.78 U	0.0858 U	0.0511 U	0.188 U	1.37 U	0.769 U	0.208 U	0.108 U	0.117 U	0.855 U	0.157 U
2,3,4,7,8-PeCDF	37.7	0.279 U	0.93 J	3.87 J	1.08 J	0.117 U	0.0975 U	0.181 U	2.1 J	0.822 U	0.204 U	0.133 U	0.365 J	1.56 J	0.158 U
1,2,3,4,7,8-HxCDF	45.5	0.839 J	2.86 J	15.2	7.57	0.204 U	0.266 J	0.257 U	6.42	1.72 U	0.874 J	0.463 J	0.661 J	3.45 J	1.19 J
1,2,3,6,7,8-HxCDF	14.4	0.42 J	2 J	11.7	2.16 J	0.0789 U	0.137 J	0.232 U	3.29 J	0.953 U	0.243 U	0.276 U	0.463 J	2.83 J	0.723 J
1,2,3,7,8,9-HxCDF	1.71 U	0.103 U	0.178 U	2.91 U	0.213 U	0.0908 U	0.0988 U	0.313 U	1.06 U	1.46 U	0.292 U	0.184 U	0.229 U	0.703 U	0.176 U
2,3,4,6,7,8-HxCDF	22.6	0.393 U	2.98 J	11.5	3.32 J	0.13 U	0.175 U	0.274 U	3.38 J	1.14 U	0.331 U	0.334 J	0.497 U	4.7 J	0.681 J
1,2,3,4,6,7,8-HpCDF	281	11.3	41.5	220	63.1	1.8 J	2.31 J	1.06 U	61.7	11.7	1.29 J	2.54	11.1	53.3	10.8
1,2,3,4,7,8,9-HpCDF	23.2	0.62 J	2.77 J	12	14	0.163 U	0.138 U	0.471 U	3.95 U	1.71 U	0.199 U	0.166 U	0.301 U	3.65 J	0.315 U
OCDF	885	63.7	134	626 J	183	3.79 J	3.72 J	2.79 J	177	39.2	1.33 J	4.25 J	29.9	105	23.5
Total Tetra-Dioxins	24.9	0.559 J	0.767 J	6.23	4.13	0.287 J	0.535 J	0.146 U	0.927 J	0.319 U	0.182 U	0.531 J	0.181 U	0.148 U	0.113 U
Total Penta-Dioxins	52.3	1.89 J	6.66	37.6	8.93	0.755 J	0.586 J	0.428 J	12.9	2.07 J	1.36 J	2 J	2.03 J	14	2.57 J
Total Hexa-Dioxins	471	16.2	84.3	238	87.7	5.16	5.48	3.22	107	9.65 J	4.00 J	10	18.3	88.7	38.9
Total Hepta-Dioxins	3,950	106	483	1,670	739	42.1	22	15.7	638	103	9.34 J	37.7	134	502	267
Total Tetra-Furans	514	4.71	15.3	53.5	18.5	0.771 J	1.61	0.149 U	9.5	0.73 U	0.241 U	2.26	2.69	32.1	3.78
Total Penta-Furans	413	7.51	41.6	211	20	2.09 J	2.07 J	0.445 J	40.6	9.01	6.55 J	9.15	11.2	87	12.4
Total Hexa-Furans	484	14	68	393	71	2.54 J	2.65	0.6 U	87.9	16	6.20 J	6.81	13	90.5	17.7
Total Hepta-Furans	1,010	46	139	597	235	5.5	5.84	4.21	187	28.8	2.89 J	6.82	35	153	30.8
Total TEQ (ng/kg TEQ) ^a	87.2 J	2.03 J	10.2 J	37 J	12 J	0.614 J	0.592 J	0.184 J	13.9 J	1.81 J	0.203 J	1.06 J	2.47 J	11.9 J	2.35 J

Table 3: Ecology interagency agreement (2010-2011): dioxins/furans (ng/kg).

	RCB235-032411	RCB236-032411	RCB237-040111	RCB238-040111	RCB239-040111	RCB240-040111	RCB241-040111	RCB242-040111	RCB243-040811	RCB244-040811	RCB245-040811	RCB246-040811	RCB247-040811	RCB248-040811	RCB267-051311
Analyte Name	E1100318-004 03/24/11	E1100318-005 03/24/11	E1100342-001 04/01/11	E1100342-002 04/01/11	E1100342-003 04/01/11	E1100342-004 04/01/11	E1100342-005 04/01/11	E1100342-006 04/01/11	E1100369-001 04/08/11	E1100369-002 04/08/11	E1100369-003 04/08/11	E1100369-004 04/08/11	E1100369-005 04/08/11	E1100369-006 04/08/11	E1100546-001 05/13/11
2,3,7,8-TCDD	0.085 U	0.0863 U	1.26 J	0.0884 U	0.135 U	0.0982 U	1.34 U	1.97	0.0617 U	0.205 U	0.241 J	1.21 J	0.0956 U	0.177 U	0.144 U
1,2,3,7,8-PeCDD	0.553 U	1.25 J	8.32	0.687 U	3.04 J	1.67 J	10.1	16.5	1.37 J	11.8	2.77 J	5.38	1.66 U	0.673 J	0.511 U
1,2,3,4,7,8-HxCDD	1.04 J	2.5 J	21.4	1.12 U	5.34 J	2.51 J	16.7	33.8	2.07 U	28.5	4.5	9.49	3.48 J	0.942 J	0.818 J
1,2,3,6,7,8-HxCDD	2.61 J	6.81	55.4	2.72 J	10.5	11.3	46.7	81.1	6.79	64.3	11.2	33.8	12.1	3.26 J	2.08 J
1,2,3,7,8,9-HxCDD	2.55 J	5.77	45.4	2.72 J	11.6	8.34	41.5	81.2	6.63	82.5	21.4	28.1	8.6	2.94 J	2.31 J
1,2,3,4,6,7,8-HpCDD	46.8	162	1380	50.1	216	136	786	1920	110	1300	146	660	216	48.1	45.9
OCDD	314	1,190	10,200	351	2,360	606	5,750	15,500 J	618	8,600	490	4,230	1,640	315	334 J
2,3,7,8-TCDF	0.544 J	0.341 U	2.34 J	0.745 U	1.25 J	1.4 J	2.32	5.51	0.114 U	1.8 J	0.113 U	1.41 J	0.709 J	0.601 J	0.36 U
1,2,3,7,8-PeCDF	0.107 U	0.105 U	1.3 U	0.161 U	0.606 U	1.06 J	2.37 J	4	0.492 J	1.11 U	0.516 J	1.05 J	0.362 U	0.122 U	0.404 J
2,3,4,7,8-PeCDF	0.252 U	0.106 U	2.07 J	0.56 U	0.832 U	1.05 J	3.51 J	5.46	0.94 J	1.91 J	0.709 J	1.57 J	0.767 J	0.314 U	0.417 U
1,2,3,4,7,8-HxCDF	1.37 J	2.86 J	15.4	1.14 J	3.15 J	3.78 J	11.2	24.7	3.33 J	8.63	2.85 J	5.02	2 J	0.855 J	1.07 J
1,2,3,6,7,8-HxCDF	0.476 J	1.81 J	7.71	0.813 U	2.21 J	2.65 J	11.6	17.8	5.28	9.85	2.32 J	4.4 J	1.71 U	0.679 U	0.595 U
1,2,3,7,8,9-HxCDF	0.136 U	0.195 U	0.635 U	0.14 U	0.831 U	0.233 U	0.446 U	0.434 U	0.222 U	2.46 U	0.416 U	0.288 U	0.769 U	0.309 U	0.152 U
2,3,4,6,7,8-HxCDF	0.39 U	1.59 U	7.11	0.987 J	2.79 J	2.38 J	13.7	15.6	4.74	8.59	1.98 J	4.78	2.07 J	0.975 U	0.34 J
1,2,3,4,6,7,8-HpCDF	7.76	59.8	269	10.9	40.6	27.6	214	421	91.5	259	20.2	101	32	13.2	9.31
1,2,3,4,7,8,9-HpCDF	0.248 U	3.14 J	18.4	0.559 J	2.59 J	1.58 J	8.72	24.7	2.06 J	4.12 U	0.207 U	5.86	1.97 J	0.519 U	0.594 J
OCDF	17.2	156	863	20.8	113	27.5	431	1,440	84.4	874	13.2	242	87.7	22.7	18.6 J
Total Tetra-Dioxins	0.085 U	1.07 J	1.26 J	1.83	0.135 U	0.0982 U	6.7	19.6	0.0617 U	0.205 U	0.468 J	2.72	0.0956 U	0.188 J	0.718 J
Total Penta-Dioxins	3.05 J	7.38	33.6	2.77 J	13.2	4.6 J	45.4	70.3	7.59	46.8	23.1	32.5	4.91	3.27 J	1.4 J
Total Hexa-Dioxins	19.6	46.9	321	22.3	82.7	74.4	297	651	48.6	423	135	273	70.1	20.9	18.1
Total Hepta-Dioxins	92	310	2,680	102	402	247	1,550	5,050	208	2,360	346	1,390	384	89	88
Total Tetra-Furans	2.24	0.104 U	28.3	14.1	7.14	19.4	48.6	71	14	45.6	28.1	31.9	11.7	5.03	5.15
Total Penta-Furans	6.28	13.7	106	37	36.1	47.4	238	144	73.1	122	40.5	72.2	38.9	23.5	10.4
Total Hexa-Furans	12.1	56	299	23.3	69	64.5	327	456	120	255	32	116	55	18.6	15
Total Hepta-Furans	21.4	178	991	27.3	113	71	496	1,190	156	620	30	258	88	31.9	23
Total TEQ (ng/kg TEQ) ^a	1.5 J	5.88 J	45.7 J	1.48 J	10.1 J	7.09 J	37.5 J	74.9 J	6.59 J	51.2 J	9.48 J	24.8 J	6.14 J	2.25 J	1.34 J

Table 3: Ecology interagency agreement (2010-2011): dioxins/furans (ng/kg).

	RCB268-051311	RCB269-051311	RCB270-051311	RCB271-051311	RCB272-051311
Analyte Name	E1100546-002 05/13/11	E1100546-003 05/13/11	E1100546-004 05/13/11	E1100546-005 05/13/11	E1100547-001 05/13/11
2,3,7,8-TCDD	0.0608 U	0.107 U	0.116 U	0.221 U	0.137 U
1,2,3,7,8-PeCDD	0.324 J	0.0909 U	1.37 U	2.06 J	0.575 J
1,2,3,4,7,8-HxCDD	0.452 J	0.19 U	2.03 U	3.8 J	0.779 J
1,2,3,6,7,8-HxCDD	1.14 J	0.46 J	4.6	10.1	1.59 J
1,2,3,7,8,9-HxCDD	1.17 J	0.363 J	4.4	8.53 U	1.78 J
1,2,3,4,6,7,8-HpCDD	23.6	9.22	112	238	36.7
OCDD	167 J	68 J	811 J	1,520 J	266 J
2,3,7,8-TCDF	0.139 U	0.0784 U	0.386 UJ	0.836 J	0.203 U
1,2,3,7,8-PeCDF	0.132 U	0.058 U	0.425 J	0.963 U	0.0765 U
2,3,4,7,8-PeCDF	0.139 J	0.0628 U	0.559 J	1.17 J	0.0828 U
1,2,3,4,7,8-HxCDF	0.451 J	0.109 U	2.23 J	4.26 J	0.672 J
1,2,3,6,7,8-HxCDF	0.28 U	0.106 U	1.1 J	2.69 J	0.446 U
1,2,3,7,8,9-HxCDF	0.0717 U	0.157 U	0.331 U	0.549 U	0.223 U
2,3,4,6,7,8-HxCDF	0.3 J	0.12 U	1.23 U	3.63 J	0.17 U
1,2,3,4,6,7,8-HpCDF	5.32	1.73 U	18.9	46.5	8.69
1,2,3,4,7,8,9-HpCDF	0.34 J	0.19 U	1.69 J	2.77 U	0.404 U
OCDF	17.1 UJ	4.15 UJ	39.4 J	110 J	27.3 J
Total Tetra-Dioxins	0.141 J	0.107 U	0.116 U	2.91	0.137 U
Total Penta-Dioxins	0.867 J	0.0909 U	4.49	16.9	0.972 J
Total Hexa-Dioxins	9.12	2.78	28.9	73.2	13.6
Total Hepta-Dioxins	44.5	18	208	449	71.2
Total Tetra-Furans	2.12	0.0784 U	3.05	12.7	2.2
Total Penta-Furans	4.3	0.907 J	12.3	36.2	6.66
Total Hexa-Furans	7.81	2 J	26.4	80	12.7
Total Hepta-Furans	15.8	2 U	50.9	126	25.3
Total TEQ (ng/kg TEQ) ^a	1.05 J	0.195 J	2.99 J	8.28 J	1.6 J

U = compound not detected at reported concentration.

J = estimated

a. Toxic equivalency concentrations of 2,3,7,8-tetrachlordibenzo-p-dioxin were calculated using mammalian toxic equivalency factors (TEF) from Van den Berg et al. (2006).

TEQ concentration is the sum of the detected concentrations for individual congeners.

Van den Berg, M., L.S. Birnbaum, M. Denison, M. De Vito, W. Farland, M. Feeley, H. Fiedler, H. Hakansson, A. Hanberg, L. Haws, M. Rose, S. Safe, D. Schrenk, C. Tohyama, A. Tritscher, J. Tuomisto, M. Tysklind, N. Walker, and R.E. Peterson. 2006. The 2005 World Health Organization re-evaluation of human and mammalian toxic equivalency factors to dioxins and dioxin-like compounds. *Toxicol. Sci.* 92(2):223-241.